

# AMERICAN EDUCATIONAL MONTHLY.

VOL. II.—MAY, 1865.—NO. 5.

## HARVARD COLLEGE.

WE have been interested in examining the late reports of the president and treasurer of Harvard College, made to the overseers of the institution. This oldest of American colleges is very justly the pride of its alumni, and of the State in which it is located. It seems to symbolize, in little, the rise and progress of this great country, of which it is the ornament. It began almost with the first settlements in New England; and in all the early struggles of the Colonies, and their subsequent successes, and their present unbounded prosperity, it has struggled, succeeded, and prospered.

We take a few points from these reports for consideration.

1. *The Property of the College.*—Exclusive of buildings, grounds, libraries, etc., which have no pecuniary value assigned to them, the property is classed as follows:

Funds appropriated to the academic department.....	\$218,409.14
Scholarships.....	184,248.81
Professorship funds, etc. ....	850,655.77
Library funds.....	89,505.60
Law-school funds.....	22,948.68
Observatory funds.....	112,688.21
Theological-school funds.....	117,685.29
Lawrence scientific-school funds.....	176,037.17
Medical-school funds.....	88,059.99
Miscellaneous special funds.....	542,011.40
Funds in trust for purposes not connected with the college.....	19,881.72
Total property in funds.....	\$1,772,076.23

There is a delusion in public opinion, that higher institutions of learning ought to pay their own way; and that those who desire to enjoy the advantages of such education ought to be willing to pay for it, at whatever rate it may cost. The principle

is not sound. No great institutions of learning have ever in the world's history been sustained by the income from their pupils. Every one of the great universities which have made the old world famous, has been largely and liberally endowed either by government bounty or private munificence. Education is not a commodity which may be left to the regulation of supply and demand. It devolves not on individuals to buy for themselves the learning by which they are to benefit society; but it devolves on society to provide for its individuals that education, in kind and quantity, which its own best interests demand. The individuals who will be most receptive of education are very often not those who have the means to buy the opportunities for getting it. Harvard College has wisely provided large scholarship funds, by which the education of poor students may be facilitated; and the president has wisely in his report urged their increase.

We call attention too to the library fund, which provides a considerable and continuous accession to the library. And we ask that those institutions anxious to connect vast observatories and expensive apparatus with themselves, should note the amount which is needed to carry on in a very moderate way the necessary operations in such an institution.

After observing the magnificent endowment of Harvard College, and reading President Hill's urgent requests for still further endowment, no one can fail to see that if we would have institutions of the highest grade, it must be by the noble and

continued munificence of the rich men of our land.

2. *Government of the College.*—The president's report alludes to the widely reported outrages committed on Freshmen at the beginning of the present year. He seems to have been, perhaps justly, annoyed by the exaggerated statements and unjust imputations circulated by the newspapers. No one but a college officer can appreciate how difficult it is to root out abuses which have grown up during years of toleration. Public opinion will not and does not sustain the application of the same severe punishments to offences committed by students, in pursuance of some venerable but detestable precedent, as to ordinary offences. The readers of this magazine will remember the astounding instance of toleration of student disorders, mentioned in connection with the opening of the Edinburgh University;—where the venerable and distinguished head, Sir David Brewster, is annually at his opening lecture assailed by hooting, and stamping, and cat-cries, and pelted with missiles. And yet this annual mob, which would disgrace a New York city Sixth Ward primary meeting, has been tolerated for twenty years.

The great difficulty in punishing such offences lies in the detection of the offenders. The code of student honor which prevents the giving of information by one against another is, in innumerable instances, an insurmountable barrier. The poor Freshman who has had his door broken in, his clothes stripped from his back, tossed in a blanket, soused in dirty slops, feels, notwithstanding, bound next morning to say that he does not know one of the cowardly wretches who "hazed" him. President Hill makes a novel suggestion in regard to remedying this evil—nothing less than that it may become expedient that the State should appoint a Trial Justice in the neighborhood of each college, whose special duty it shall be to ferret out offenders of

this character. It is possible that such a plan would be the most effectual that could be adopted. Whenever public opinion becomes as severe upon students' offences as upon like offences committed by others, the difficulty will be remedied; and perhaps the enforcement of the laws against student depredations will do more towards educating the public mind up to this wholesome severity than any thing else. This subject demands the attention of the conductors of colleges everywhere. We submit whether the time has not come for a general and wholesome reformation in the treatment of student offenders.

This report of the condition of Harvard College gives us new reason to congratulate it upon its good fortune in its selection of presidents. Among all the great men who have presided over it,—Increase Mather, Edward Everett, Jared Sparks, and Cornelius Felton,—there has been none better fitted for the place than Dr. Hill. With learning of the most varied kind and profound character, he unites the characteristics of a practical educator. He is familiar with nature, "from the cedar-tree that is in Lebanon even unto the hyssop that springeth out of the wall;" he can compute the curve of a planet, or the place where a meteor will strike the earth. He has contrived a machine which will indicate within a minute or two the precise time of an eclipse. He can discuss "stone bugs" with Agassiz, mathematics with Pierce, botany with Gray, Greek with Sophocles, and can write poetry that would be commended even in those poetic shades where Longfellow, Holmes, and Lowell are touching their harps. In addition to all this, he can see, with his broad glance, the whole domain of human knowledge, and can adjust, adapt, and systematize all in one connected and harmonious scheme of education. Such a man is the president of Harvard College.

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POPE once engaged in an argument on an obscure line in Horace. A young officer observed that a note of interrogation put at the end would make it clear.

Pope, little, deformed, and vexed, said: "Do you, sir, know what an interrogatory note is?" "Yes," was the answer; "it is a little crooked thing that asks a question!"

## OUR MILITARY SCHOOLS.

MILITARY discipline and drill should occupy an important place in our educational system. Upon this point the old schoolmaster, *Experience*, has given us some very convincing evidence, to which theory can add nothing and from which argument can take nothing away.

The rapid increase in the number and popularity of military schools of late years, seems to indicate that the people at last appreciate the necessity of being prepared for war,—and this is the surest way to prevent war. It was our total lack of military spirit, and our unprepared condition, that suggested to the Southern leaders the possibility of obtaining by force of arms what they could not by means of cunning and ingenuity. We waited until the war was upon us, before we began to prepare the material for making good officers and soldiers; and it nearly proved our ruin.

We might with as much safety begin to extemporize coast defences, with a hostile fleet in sight of our harbor, as to organize an army from raw recruits, with the enemy marching on our capital.

We may be prepared for war in two ways,—by keeping a large standing army, or by educating the people in the use of arms, so that an efficient volunteer force may be rapidly organized. The latter plan is the only one consistent with national prosperity and the spirit of our republican institutions. There are, however, some requirements for the successful prosecution of a war, which no amount of popular military education will enable the volunteer system alone to meet. There must be a great military leader, with genius to direct the complicated machinery of war, to grasp and frustrate the designs of the enemy, and to plan great strategic movements. Such a man no training will produce. He seems to be heaven-sent, as Castor and Pollux, when they came from the gods to the routed Romans at the lake Regillus. There must be, also, experienced assistants to superintend the execution of great movements, who are acquainted with all the appliances of war, and familiar with all the resources of modern engineering. These

men must make military science a profession. They may receive their training at the national military academy; and in order to give them practice and employment, and at the same time provide a nucleus for organizing the volunteers, a small army of regulars must be maintained. This has, in fact, been the policy of our government heretofore; in which few, if any, improvements could be suggested.

But it is in the great mass of the volunteer army,—the rank and file, with the officers immediately in command,—that the need of popular military education is felt.

Here was our weakness at the beginning of the war. The army was composed of men hastily brought together from the various walks of life, entirely ignorant of drill and the use of arms, unaccustomed to obey, and despising, with democratic instinct, all distinctions of rank. These men, to a great extent, were commanded by civilian officers, with nothing to recommend them to the position but political influence. Such officers could have no ability for leading in battle, or for providing for the health and morale of their troops in camp. Few men can command with decision and confidence at first. Authority is acquired by practice, and seldom inherited by nature.

The military discipline of the boarding-school (which is in no way a hindrance, but rather a help to other departments) is well adapted, if thoroughly carried out, to remedy these difficulties. Boys may be taught at school to be very expert in the use of weapons, to execute with precision all the evolutions of the company and battalion, and, what is of equal importance, to obey promptly and silently. They will learn also to respect distinctions of rank and military etiquette, which are absolutely essential to discipline in the army. Those that have sufficient experience and ability are appointed officers, and learn not only to give the word of command with decision, but also to exercise authority in a judicious manner. A week or two spent in camp during the summer, will give an opportunity to learn the details of camp life, and be an excellent preparation for actual ser-

vice. A volunteer army composed of men and officers thus trained in youth, and directed by experienced leaders, would be scarcely inferior to a regular army. In many respects the volunteers would have the advantage: they would, as a general thing, possess more intelligence, more pride of family, more enthusiasm, and better habits, than the regulars, while at the same time they would be nearly or quite as easily handled in the field.

It is of great importance, then, to the country, that our young men receive, as far as practicable, a military education. To effect this it will not be wise to trust entirely to private enterprise,—the original outlay and the running expenses of a thorough military school are too great, and public patronage is too uncertain. While the national government supports the military academy and naval school (which

ought to be the best in the world), and, as heretofore, in time of peace keeps a small regular army, it devolves upon the State governments to encourage military education in the States. This may be done by establishing State military schools, and by supplying private schools with the ordnance stores necessary to organize a military department. Schools thus supplied should be required to make regular returns and reports to headquarters, and should be examined every year by the State commissioners. This would insure a proper use of the public property, and be a great incentive for the pupils to excel.

We have so far considered military education only in the light of public expediency; we may in a future article answer some objections urged against it, and point out other advantages to be derived from it.

#### DR. ARNOLD OF RUGBY.

WE know of no more valuable book for the teacher's library than the life of Dr. Arnold, by Dean Stanley. We have heard of Dr. Arnold, the head master of Rugby School, and few are unwilling to regard him as the prince of schoolmasters. All who have read a "Letter from London" in the newspapers, have heard of the brilliant sermons of Dr. A. R. Stanley, Dean of Westminster Cathedral. In these two men we have the teacher and the pupil, the latter being the biographer of the former: unless we prefer to consider Dr. Stanley the editor of the Life of Dr. Arnold, rather than his biographer, since he compiles rather than comments. At any rate, which is not always the case, the painter does not stand between you and the picture, but allows the life under discussion to develop itself by numerous selections from letters and diaries. Thus we get the entire inner life and thoughts of the great teacher, so far as the pen unrestrainedly used transcribes the mind.

Although the mind is so far superior to the face, and the heart to the countenance, our eye has rarely fallen upon a counte-

nance so filled with thought and feeling. Few as forcibly remind you of the difference between the Latin *os* and *vultus*, the *features* and the *expression of countenance*. Of all the faces of distinguished educators which we have had the pleasure of seeing, none have left so striking an impression of commanding power, of earnestness, of unselfish love. The engraving of Dr. Arnold in the first of the two volumes containing his life is a profitable daily study for the teacher. We hardly know how one can better refresh himself, after coming home exhausted from school-room labors, than to take up and study this life and this face. Experience has proved this assertion. The change from the atmosphere of the school-room to the presence of this living, enthusiastic, sympathetic man, reanimates and encourages the teacher. For you are in the presence of a Christian teacher, a practical teacher, and a teacher who loved his work.

If any one ever Christianized school keeping, it was Dr. Arnold. The practical Christianity of the heart was a working principle with him. He carried his relig-

ion into the school with him. It helped him govern, it helped him instruct, it helped him educate in every sense of the word. How much better is this than to do as some men do, who leave their religion at home like their best coats when they go about their business! In Dr. Arnold's eye, step, voice, and word, there was the simplicity of love. He wrote his chapel sermons to the boys the hour before meeting them that he might the better hit the immediate state of their minds. He said, with regard to reforms at Rugby, "give me credit, I must beg of you, for a most sincere desire to make it a place of Christian education." He ate, walked, bathed, and studied with his pupils; and, although in these intimate and cheerful relations, he never forced upon them religious topics of conversation, he was ready to answer and discuss any religious or moral question.

But with all this loftiness of thought and demeanor, giving him that dignity which a boy respects and fears, he was a man of such simplicity and of such common sense and knowledge of boy nature that he was a practical teacher. Just as his religion was of that genial nature which attracts rather than repels, so his remarkable scholarship and cultivated manners were of that objective, generous stamp which won the confidence of boys. Dr. Arnold, unlike a great many who are called scholars, at the present day, was not a *receiver* only but a *doer*, not the pool filled to the brim yet with no outlet, but the pool which sends out its life-giving stream gladdening the valley. He was an active, not a passive man and scholar; the hammer, and not the anvil.

He penetrated to the mind and heart of a boy. He knew by an intuitive glance what was the status of his mind, thoughts, and disposition. Dr. Arnold was most successful in teaching by question and answer, because he had the power of discerning so readily and accurately a boy's mind and knowledge; and he had the knack of putting his questions so as to draw him out, that is—educate. With him a recitation was not a grave examination, as is sometimes the case, but instruction in the highest degree. His questions pressed the mind to its extreme tension, and thus left

it aglow with mental warmth and ardor. But Dr. Arnold taught because he loved to. Nature gave him his commission, and of course he was successful. This love for the work is rare in a teacher of Dr. Arnold's calibre and character. Some teachers have the power of impressing upon scholars the conviction that their work is of great practical importance, and the scholar takes hold of it with zeal for this reason. Other teachers have the power, where the conviction of this practical importance is wanting in the scholar, to induce so lively a mental excitement by the mode of questioning and the order of the recitation merely as to charm the mind fond of novelty and excitement. Dr. Arnold excelled equally in both these respects from his love for educating, for imparting knowledge; in a word, on account of his innate love for bettering the heart and mind.

Dr. Arnold threw himself into the sympathies and thoughts of his boys and knew what suited a boy's mind. He ruled by love, a kind of ruling which some men are incapable of, and which others are too indolent to employ. Consequently, instead of being a monotonous *driver*, he was the leader of his company of youths into the arena of mental trial and into the conflict with evil. They respected, loved, and trusted their leader. When the teacher loves and respects his work there is a warmth and enthusiasm which is its own reward. As usual in such cases the lesson acts as discipline enough. It is surprising to see how the manner in which a lesson is learned and in which the recitation is conducted affects the order of the recitation room.

Is there but one Dr. Arnold in a century? Is there but one such teacher who seems to have received a seal from God to make us realize how great and honorable a work we are engaged in, and how much happiness there may be in it, if it be undertaken in a Christian, practical, and enthusiastic spirit? Dr. Arnold seems to have stepped into the ranks of teachers to show them that theirs is really a profession. We cannot contemplate his life without being bettered, and without feeling that it invites us to an effort to bring the teacher's work to a higher stage.

## THE HEALTH OF TEACHERS.\*

PROBABLY all normal occupations are healthful unless they are conducted in a manner not justified by the laws of the body and of the brain; but if there is one single occupation the engagement in which should be peculiarly promotive of health, it is teaching; because this pursuit gives healthful mental excitement, constant intercourse with the young, who are almost always hopeful, mirth-provoking, and buoyant; because regularity, cleanliness, and good habits, are demanded; because the number of hours of labor is less than in almost any other pursuit, thus giving the teacher an opportunity to recreate, exercise, etc., etc. And yet teachers as a class are not healthy. Where they follow their profession faithfully and without intermission, they, with few exceptions, rarely hold out more than ten years. Often a single term is sufficient to destroy their health and usefulness. The country is full of *broken down* teachers, most of whom are of that age when they should be in the prime of life. Their throats give out, they have dyspepsia, liver complaint, torpidity of the bowels, coldness of the hands and feet, muscular debility, consumption, and nervous disorders. What are the causes and what is the remedy, are the questions. Without going into details, I will enumerate a few of the most prominent causes of ill health and an early failure of the bodily powers in this most useful and highly cultivated class of our population.

First among these causes is the too early entering upon a teacher's life, with the excessive mental strain necessary at that age to fit one for occupying the position. Haste always makes waste, unless it is haste to change bad habits for good ones. To consume, at a time when the body is perfecting its organism, the nervous energies upon the brain and nervous system, thus robbing the body, defeats a very important end, and one that has an important bearing upon physical integrity. And yet this is constantly done. Youth all over the country, sixteen, seventeen, and eight-

een years of age, are found occupying the pedagogical chair when they ought to be growing; they are using on the brain and nerves too much of their life-power, and the result is premature exhaustion, a dwarfed body, broken down nerves, and ruined health. No young person who values soundness in his own person half as much as he does in a horse, should enter arduously upon the duties of a professional teacher, until his body is thoroughly developed and in a robust state.

Another cause may be found in the ignorance which exists in relation to physiological law. Physiology in a general sense is one of the *exact* sciences. Physiology is to human health what mathematics is to computation. To violate the rules of mathematics in settling commercial and business transactions leads to the worst of results, financially; to violate the rules of physiology destroys health. Business men see this, and will not employ an accountant who does not understand arithmetic. Now, when we show the same wisdom in making the laws of life and health as thoroughly taught as we do mathematics, we shall have few mistakes made in living, and little ill-health. No teacher should enter fully upon his profession who is not as thoroughly versed in physiology and the necessity of physical culture, air, exercise, sleep, proper clothing, mental hygiene, bathing, exercise, etc., etc., as he is with the rules of grammar or the multiplication table. Physical culture, its uses, laws, and the best means of obtaining it, should be as well mastered by the teacher as the alphabet, both for his own personal good and for the welfare of his pupils.

Lest I be less practical than I should, I will now enumerate some of the special causes of ill-health among teachers. And first comes the excessive nervous or mental strain which a teacher is obliged to maintain in governing his pupils, and in imparting instruction. To teach well requires that the brain be in a high state of activity, while the muscular and digestive system are not called into high action. The strain comes too much in one place. For a while

\* Dr. Holbrook, in *Herald of Health*.

the nerves grow stronger for this, but unless at the same time the muscular, digestive, and circulatory organs be kept healthy and strong, there is want of balance produced, and, sooner or later, the person breaks down. Very often this excessive strain is, with our present defective school system, unavoidable. Too many pupils may, and often do make it necessary either that the teacher should bear the burden or quit the business. Sometimes the teacher is not adapted to his school, nor capable of governing or of teaching it, and this occasions friction and the excessive labor which produces the ill results. These things *seem* unavoidable, but in a very large proportion of cases the effects could be remedied by a wise system of physical culture. Every schoolhouse in a city, every college and young ladies' or boys' seminary or high-school, is defective without its gymnasium, where physical training can be secured, for both teacher and pupil. These, however, are not yet available to a great extent, but gymnasiums are being established in most of our cities, to which they should resort. Two evenings each week devoted to wise physical culture, will do very much to keep teachers in health. Those who live in the country may for gymnastics substitute out of door sports, gardening, skating, horseback exercise, and botanical, geological, and other excursions. The true way to teach botany, geology, and geography, is to do it in considerable part out of doors. The same is true of surveying and kindred sciences. I rank wise physical culture as one of the most important means of keeping teachers from that host of nervous disorders to which they are subject.

Next comes air, or rather pure air. If we were always as particular not to breathe foul air as we are not to drink dirty water, we should have a different race of beings, physically, from what we now have. It is a physiological truth that the amount of nervous and muscular energy manifested by all living creatures, from the lowest polypi to the highest vertebrated animal, is about in proportion to the amount of air they breathe. We live in proportion to our breathing. Now, teachers proverbially violate the law of breathing, and suffer for

it. Confined in a room with from thirty or forty to one hundred children, who consume the air rapidly and contaminate it with that deadly poison, carbonic acid, besides other deleterious gases, the air of a school-room, ventilated as a majority of them are, soon has a peculiar stench, most offensive to one who is in the open air much, but quite unobserved to the inmates. If there is *one* thing which teachers ought to do, it is to ventilate, most thoroughly, their school-rooms. It is also a well understood fact that the clothing, if tight about the chest and waist, even if no tighter than a fashionable gentleman's vest, cuts short the amount of air inspired several per cent., and with it the amount of life and health. All ladies who teach school should take special pains to wear the clothing loose about the breathing apparatus, if they would breathe well. The corset has shortened the life of many a school teacher, and made what there was of life less effective.

In this connection I might also add a few hints about the health and vigor of the muscles of the chest, back, and abdomen. The occupation of teaching does not call these muscles into vigorous exercise daily, consequently they grow weak, flabby, and almost useless. A young man or young woman after following this profession a few years loses strength of sides, back, abdomen, and chest. Now, the health of an individual depends largely upon strength here. You can pretty clearly estimate a person's health by the vigor of the muscles of the chest and back. If teachers would put these muscles to the test daily, so as to retain them in vigor, they would find disease prevented and health restored in a multitude of instances. Perfect breathing depends largely upon the health of these muscles. A few exercises which have this end in view should be practiced daily. A few moments should also be given every morning to deep inspirations and expirations, so as thoroughly to expand the lungs and aerate the blood.

Perhaps I ought to say one word in regard to food. Teachers usually get enough of *what is called the best of food*, unless they board at city boarding-houses, when their case is generally a hard one. This

"best of food" is, however, too often the very worst. I need not here go into a discussion of diet; suffice to say, abundance of *plain substantial* food ought to be the rule, and all spiced, highly seasoned, and in common parlance, "rich" articles, should be religiously avoided. The delicacies and luxuries which a perverted appetite seeks, in pies, cakes, and pastries, ought to be found in the best of fruits.

A teacher ought to sleep abundantly in order to give nature a chance to restore and build up what action has torn down in the wakeful hours. Most teachers would be benefited by eight hours' sleep every night.

The daily bath should not be forgotten. I know that there are a multitude of persons in this profession who think they cannot bathe without injury. Let all such study the philosophy of bathing, and with great care train themselves to it, when they will find it not only a luxury, but a health preserving habit.

Cold hands and feet are very common with sedentary persons, and with nearly all who think or use their nerves much and their bodies little. Cold feet show a want of equal circulation, and, when they

become habitual, are a source of much discomfort and disease. Proper exercise, particularly dancing, and the stamping and other feet-exercises of the new gymnastics, are some of the best remedies.

There are few professions where good health is more important than to the teacher. They can govern their schools and impart instruction easily and thoroughly when well; but when ill, every thing goes wrong. Many a pupil has had his ears boxed and his back striped because the teacher was out of sorts, and often the health and good nature of the teacher has caused him to pass over, as of little moment, even grave offences. I am more and more convinced every year that teachers are poorly qualified to fill, properly, their vocation, unless they have sound constitutions, thorough physical culture, and physiological knowledge. These, added to the most thorough drill now given, in normal schools, seminaries, and colleges, would make them the most healthy class of our citizens, instead, as now is, too often the case, nervous, dyspeptic, scrofulous, and consumptive and broken down in body, before they have come to maturity.

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### TEXT BOOKS.

**N**O country is better supplied with *variety* in text-books than our own. Many of these books are of the highest order of excellence. Their peculiarity consists in simplifying the subject to the capacity of a schoolboy: mathematical books are special examples of this. Algebra is studied understandingly by pupils less than fourteen years of age, and even the Differential Calculus sometimes forms a part of an academical course.

Books in every department of science have been adapted to school use. None of the "*ologies*" have escaped the school-book makers, and we have "First Books" in almost everything, with "pictures" in all styles. Some books are full of "cuts," many, it is true, sordidly executed, but others really a credit to the engraver's skill, and sometimes far better than the

text. We have books in "series"—regular progressive courses from No. 1 to perhaps 20,—Readers, Arithmetics, Physical Sciences, and Languages, adapted to any age of pupils or grade of school. Some of the elementary volumes are written in so agreeable a style that old students, and even some teachers, may read them with pleasure and advantage. Still, with all this, there are "loads" of them that are only like the "wooden nutmegs," made to sell. A "Series" is something made by clipping one book and making another out of part of the cuttings,—a little smaller and cheaper; this is then a "First Book" or "Introduction" to its parent. If we are to judge of a book by the recommendations of it which we may read, we would often be sorely deceived. So also, if we suppose that a book is the very best of

its class, because adopted by some State Board of Education. The truth is, few of these things are voluntary or disinterested, and it would be far better and fairer, in all cases, that text-books for Counties or States should be selected by a convention of experienced teachers. Publishers should furnish teachers with their books on very liberal terms, so that they may be tested in the schoolroom. We venture to assert that no schoolbook can be properly estimated, except by actual use in the classroom. Merely turning over the leaves, or reading the preface, is insufficient. Let any one examine the score of modern Arithmetics, and he will be much perplexed in deciding which is the best in all respects. The same is true of Grammars, Histories, and Geographies. School officers who are not practical teachers, should not undertake to "fix" the text books for their jurisdictions without, at least, a consultation with the teachers who are to use them.

A text-book should be devoted to its own subject. An Arithmetic should be an Arithmetic; not a mixture of a little mensuration, a little Geometry, and a little Bookkeeping. These subjects need separate treatises. Some Geographies have a little of Astronomy in an appendix, and a modicum of Geometry; and some Histories have a heavy percentage of Geography. This would be all very well if these additional subjects were not also a regular part of the school studies, and treated of in due course. Besides, the little which they have room for violates the significant injunction:

"Drink deep, or taste not the Pierian Spring."

Again, the books professing to be a "Series," regularly progressive, seldom are so; the second book is mostly a repetition of the first, with some additional matter; the third, a compound of the first and second, and so on. Some "Higher Arithmetics" have even little examples in simple addition, the multiplication table, and the like, with pages of other matter that was fully treated of in the lower numbers of the series. This constant repetition of very simple and primary matters in *all* the numbers is out of place in a "Progressive

series." A good course would be, one that contains nothing in one number which is already disposed of in another. Let us take Arithmetic as an illustration. A child commences this, say at six years old, and continues it, more or less, till sixteen or eighteen. Now for the child of six, we need only a work containing the tables for counting, adding, and so on; when these are well learned we need a book containing a *very great many* mental and slate exercises in the fundamental rules, for children learn mainly by constant repetition, and the best-worded book is nothing to them in their early career. After these primary rules are well practiced, we need an ordinary Arithmetic containing only the useful and practical, largely illustrated with examples, an intellectual as well as a ciphering book, but with no puzzles, no algebraic or geometrical questions, and every rule well explained and analyzed, with constant review exercises. There is no necessity nor wisdom in having an Intellectual Arithmetic separate from the common one. Mental and slate exercises should go together through all the numbers. Then we need a "Higher Arithmetic," taking up the properties of numbers, all the varieties of solutions that can be advantageously used, with full explanations, entering into the rationale of the various processes, all the difficulties that occur in calculations, all the niceties of the science, with the most concise methods of operations, such points, in short, as would be little understood or used by younger pupils, omitting all the simple questions that every school-boy of ten or twelve years of age knows full well. A certain "Higher Arithmetic" has the following: "*Find the product of 345 by 3,*" and even this fully worked out. Such questions are as much out of place in a "*Higher*" arithmetic, as one involving complex fractions would be in a "*First Book*." The same thing occurs in almost all other "series"—Algebras, Geometries, Geographies, etc.—the *higher* book is but a repetition of all the lower ones. If a school uses a "Series," let it be a real series, adapted to successive classes who are progressing. But some are declared to be progressive only in this, that they are adapted to different *grades* of schools,

the Infant, Primary, and Grammar schools, Academies and Colleges. In this respect they are well named and adapted; but a real progressive series for the same grade of schools is yet a desideratum.

Let us hope that a truly progressive "Series" may yet be published, and that text-

books will be adopted because of their real merits, by conventions of practical teachers. After all, text-books are only auxiliaries in teaching, and those are the best which furnish the living teacher with the most suitable materials for his instructions and illustrations.

## STRAY CHAPTERS FROM THE HISTORY OF A STINGY FAMILY.

### THE FLINT SCHOOLHOUSE.

WHEN Thomas Flint was five years old the old log schoolhouse in his father's district was razed to the ground by a furious storm. This astonished all who had ever seen the said schoolhouse, for the openings in the wall were so large and numerous, that it was supposed the wind could have passed through without serious interference. Nevertheless the building had fallen and the honor of the town required its rebuilding. Hence arose a great discussion as to the proper location. The old schoolhouse was built on Mr. Flint's farm, at a spot which, being utterly unfit for cultivation or any thing else, he had with singular generosity donated, on condition, however, that his family should have "free schooling." It was now proposed to rebuild the schoolhouse on the same spot; but a large and influential body of townsmen, living in the west end, determined to have it somewhat nearer themselves. Such arrant selfishness was promptly resented by the indignant residents in the east. Mr. Flint's farm lay just fifty yards east of the central line, and he naturally joined those from the east. As soon as his decision became known, the strife of words knew no limit; old friendships were broken, and the peace of the various religious communities was sadly endangered. One clergyman unfortunately took sides in the affair, and public opinion ran so high against him for "mingling politics with religion," that he was compelled to leave the place.

At last a town meeting was called and a vote taken, which resulted in a victory for the east-enders, and all became quiet. A committee of the victors was appointed

with power to rebuild the schoolhouse wherever they thought best. Mr. Flint renewed his liberal offer, which was accepted. The schoolhouse was rebuilt after the manner of the old one, saving that the chimney was somewhat shorter than its predecessor, as a number of bricks had been hopelessly broken in their fall. The old desks were patched and put up, but the benches were useless. It was necessary therefore to procure some "first cuts" from the saw-mill, which were mounted with the flat side up to support the future men and women of H—. The house was finished and the school reopened.

### THOMAS FLINT'S FIRST SCHOOLMASTER.

The town of H— at this time had been very fortunate in securing the services of a remarkably excellent teacher, though at the high rate of "ten dollars a month and found." He was an original character. I have no doubt you have seen him or read of him. In his earlier days he had been a farmer, but proving unsuccessful had converted himself into a physician of the eclectic school. Here, however, he was so unfortunate as to kill about twenty patients during the first three months of practice, and it was thought advisable for him to give new direction to his talent. This he did, and became a teacher, of the orthodox style, possessing great store of muscular strength with amazing paucity of book-learning. The latter indeed he despised, as tending to divert the attention of young people from their legitimate business. He was a thorough believer in "the three r's, reading, 'riting, and 'rithmetic," which, he affirmed, were all that was necessary for any person; more than these came of

evil and would inevitably lead their possessors thither. At this time he was fifty-two years old, and much bent with premature old age or indolence. For the time, however, he was a good teacher; he could wield the birch with a wondrous skill and emphasis, could "mend a pen" with great ease and exactness, and could sit at the fire-side gossiping with the grand-dames of H— beyond all who had gone before him.

#### THOMAS FLINT'S FIRST WEEK IN SCHOOL.

To this man Thomas became a pupil. Mr. Flint led the unwilling Thomas into the presence of Mr. Williams, the teacher. This individual left his stand and waded through the mass of infantile humanity, that, for lack of room on the benches, took up their quarters on the floor round his desk. After a very brief exchange of ceremonies Mr. Flint introduced his son, and gave him in charge of the teacher. At the same time he affirmed his belief in the depravity of human nature and urged unhesitating application of the rod, assuring Mr. Williams that, should he spare the rod, he would certainly be a hater of the child. To all this the individual addressed gave a decided assent, and, with a terrible scowl at poor Tommy, promised to obey not only the letter, but the spirit of the injunctions. Highly gratified with the interview, Mr. Flint scraped his foot and retired.

A seat was then provided for Thomas, after which Mr. Williams promptly proceeded to open the school by reading the Bible. This over, he delivered himself of a disquisition on the importance of close application to study, assuring the pupils that they, if idle now, would ever after feel as he then felt, that they had thrown away the noblest opportunities ever afforded to mortals. He expatiated at great length upon "the rules of the school." He then assigned lessons to the several classes, and these were nearly as numerous as the pupils, because the great diversity of books prevented any thing like classification. Some other matters of less importance occupied the greater part of the first day. Finally, school was dismissed. Tired and sleepy, poor Thomas went home, only to be sent supperless to bed, to atone for any

possible wrong committed by him and overlooked by the teacher.

During the next day nothing of note happened, but the day following opened full of evil portent for Thomas. His buttermilk choked him at breakfast, he tore his jacket as he passed out of the gate, and crushed his finger in the bars as he put away the cows; in consequence of all which he received severe punishment. But before starting for school matters appeared to clear up somewhat, and though aching in several parts of his body, he went on his way rejoicing, determined to exercise some of the accumulated knowledge of trickery into which he had been initiated by his youthful contemporaries prior to his presentation to the pedagogue.

Mr. Flint was a staunch Presbyterian of the most ancient school, and believed that the only primer which could properly be put into a child's hands was the Westminster Shorter Catechism; which he therefore sent, with a request that Thomas be drilled in "this valuable compend of religious instruction" as often as Mr. Williams might find convenient. Of all books none were more dreaded by poor Tommy than this, since Sunday after Sunday its contents had been poured into his unwilling mind. He determined therefore to evade the catechism in school. Nevertheless the dread of future punishment induced him to take the hated book with the much more hated message to Mr. Williams.

A lesson was immediately assigned, but was so distasteful that it could not be learned. Tommy's attention was soon directed to other matters. The novelty of school had already worn off, the worthy pedagogue was oppressively strict, the older boys becoming extremely annoying, and our poor hero wished himself safely home. His face wore an expression of sorrow and abstraction, which was perceived by a fellow-pupil, who was looking about for something new. Watching his opportunity, he threw a chip at Tommy, striking him fairly on the nose. Tommy's temper was aroused. He tore a leaf from his catechism and, fashioning it into a ball by the aid of his teeth, threw it at his adversary. The movement did not escape the watchful teacher, and, in a second, poor Thomas

was swinging high in air midway between Mr. Williams's head and the rafters. There he performed several acrobatic feats equally rare and picturesque; after which the rage and muscular strength of his instructor failing, he came to the floor with emphatic celerity. He was then left to collect his scattered senses and to reflect upon the muscular development of the master.

He was soon after called upon to recite, when the mutilated condition of his book was discovered. The rage of the teacher knew no bounds. The old rod was insufficient for the occasion. In order, therefore, to afford opportunity for procuring a fresh one, Thomas was advised to wait till the afternoon, when the teacher, having armed and equipped himself according to "pedagogic law," would be prepared to inflict justice. At the same time, Mr. Williams informed the school that the time had now come when his authority must be asserted, and also, that, while he regretted that the first victim should be one of so tender years, he felt that the offender had been born in sin, which had become so thoroughly incorporated in his nature that he was already old in its ways.

In the afternoon came a lengthy lecture on morals and human depravity. Then the school was compelled to witness a public flogging. But I draw a veil over the scene; I need not moralize upon the degrading effects of such an exhibition upon the culprit and his fellows.

Did such punishment do Thomas any good? He only whimpered during the afternoon and refused to study. The pun-

ishment engendered lasting hatred for the teacher: his finer feelings were blunted, and he determined to be "even." Those looking on only laughed at the sufferer and thanked their lucky stars that they had not been caught. The affair, however, had a salutary influence on the order of the school, for during the afternoon not a whisper was heard, and a shudder passed through every one as the teacher approached him.

Friday morning came, and with it came Thomas to school with his father. This gentleman was in high dudgeon at the brutal treatment his son had received; being, strange to say, enraged to find his injunctions so faithfully obeyed. But when he learned that Thomas not only refused to study the lesson, but had torn and stamped upon the catechism, and when he was informed upon other points by the veracious Mr. Williams, his angry feelings were soothed, and he became profuse in declarations of gratitude, promising his son proper chastisement that evening. In this condition he took his departure; but soon after returned for his son, having determined to reward him immediately.

Thus ended Thomas Flint's first week at school. My history may appear to some exaggerated, but those who have sought knowledge in the early log-schoolhouse, can testify to its truthfulness. I purpose in my next stray chapter to give an insight into the mysteries and miseries of that time-honored practice of "boarding around," as developed by the experience of Mr. Williams.

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## OBJECT LESSONS.

### THE SCIENCES.

**O**BJECT Teaching in Chemistry and Physical Science is principally teaching by *experiments*. If your pupils are to learn the properties of *Oxygen*, you have to produce oxygen in their presence, and to experiment with the oxygen so produced, so that they observe carefully every phenomenon about it. There being several

methods of producing oxygen, you will choose that method which will be most easily understood by your pupils in their present stage of mental development. For the first principle of Object Teaching is to *proceed gradually* to have your pupils fully prepared for what they are to witness, not to assume that they know any thing which they do not fully know by sensual perception and their own conclusions

drawn from it, and to lead them on step by step to the facts of a higher order to be witnessed, and to further conclusions to be drawn therefrom.

With beginners in Chemistry, who do not yet know chlorate of potash or manganese, it is therefore better to produce oxygen not from these, but, as a first experiment, by the poles of a galvanic battery from water, in just a sufficient quantity to make with it a few elementary experiments. If your pupils have before studied Electricity and the Galvanic Battery, so much the better: if not, they will at least understand the experiment, if you first weigh the water before you decompose part of it, and later, what has remained of that water. They will thus be enabled to find that the missing quantity of water must have dissolved into the two kinds of gas, contained within the two glass tubes above the two poles. They will be enabled to conclude from the difference of the measure, to which the water has been driven out by the two gases, that of the two components of water, the one fills double the volume of the other, that gases are considerably more voluminous than the liquids out of which they originate, and some other laws. You tell them now, that the less voluminous of the two gases is called Oxygen, the other Hydrogen; you cork the tubes and begin experimenting with the Oxygen.

At each stage of the proceedings you ask them what they see (or otherwise perceive by their senses), and direct their attention to what they do not see or perceive, but *may* see or perceive. You are careful to make them find the correct expressions and state all their perceptions in coherent and logical language. For the second law of Object Teaching is to *sharpen the senses and the perceptive faculties in general*, to accustom them to careful observation. You ask them next, what they conclude from the facts observed: you must not tell them the laws, embodied in the perceived facts; they must find them all themselves, and your highest merit is in asking them such questions as will *set them to thinking and concluding*. This is the third law of Object Teaching. One correct conclusion, drawn from the facts

observed by the pupil himself, is of more value toward his education than ten hours' preaching to him about the same facts and laws. It is often much more difficult to so arrange your questions that he must hit upon the correct conclusion, than it would be to explain to him in the simplest logical *exposé* the principles underlying the facts. But that very roundabout way, on which you lead him to his own mental activity, is just the indispensable condition of success—you make him self-acting, his own teacher.

It is also essential that you should *exhaust the subject* under treatment as far as possible, without, however, giving too much at a time. The pupil should be enabled to bring you in the next following lesson a written statement of what he has observed and learned by conclusions, or else state the same in coherent language orally. This ought to be a composition, or, if you are, at the same time, a teacher of composition, it ought to furnish the subject of the next task in composition. The more you make your pupils write compositions on matters falling within the compass of their sensual perception and intelligent observation, the better compositions you will obtain of them, the more you will avoid a grievous fault of cotemporaneous education, to wit, the fault of training youth to talking and writing grandiloquent nonsense about matters which are above their comprehension. We need not point out the pernicious effects of such education. Each of your object lessons should, therefore, exhibit a picture, as it were, complete and rounded off, as much as possible, so that each part of it support the impressiveness on the mind of all the others, and that the subject should be, within reasonable limits, exhausted. This is the fourth law of Object Teaching.

You cannot fail to conclude that the proceeding described is of slow progress. It is so, indeed; but only in the beginning. You consume a great deal of time, at the outset and with the elements of each discipline; but you gain in the end. You will develop a far greater percentage of able pupils, than otherwise, who will not easily unlearn what they once have mastered; who will, at later stages of the

course, almost instinctively make out the real point of issue in each fact or theory, who will help you materially in experimenting and save to you many explanations, otherwise necessary. Each of your lessons will become a festival for you and your pupils, and your progress will the longer be accelerated.

It is true, it takes an able teacher to treat Chemistry and Physics in this way. Not only must the teacher be experienced in teaching, quick to perceive what every one of his pupils lacks to a correct understanding, and to apply the appropriate remedy, the questions best adapted to the case, but he must also understand his pe-

culiar branch of science thoroughly. Still, as regards the latter requirement, we speak from a thirty years' experience with teaching and scholars when we say, that though a teacher can never know *too much*, the most learned men are rarely the best teachers, and the best teachers are rarely the most thorough scholars in each particular branch of their instruction. An earnest will in a teacher to reflect credit on his profession and to benefit his pupils, will often supply what he lacks in present information, and by repeatedly teaching what he only of late has mastered himself, he will at last turn out a good hand at his new specialty.

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### DREAMS.

FROM the most ancient historic times dreams have been regarded with interest in almost all grades of society. They were formerly viewed as the media of special revelations from heaven, and their expounders were treated with the utmost consideration as beings of higher intelligence, so that if any were fortunate in interpretation, they were advanced to important positions in the government. Among the Greeks and Romans, dreams were regarded as important omens, according to which extensive expeditions were frequently dispatched or delayed. The emperor Augustus, though a man of great talent and refined imagination, was nevertheless so subjected to the superstition of his time that, in obedience to a dream, he acted the part of a common beggar during one day each year and accepted alms of such as chose to present them. The North American Indians entertain exaggerated beliefs in the efficacy of dreams. In modern times, however, among civilized nations, the phenomena of dreams have lost their significance; those professing to interpret them are of the lowest orders, and are regarded as impostors; while those consulting them are no longer the educated and intelligent, but the ignorant and simple.

The nature of phenomena so prevalent and of so much supposed importance as dreams, could not fail to be a matter of

careful inquiry among the ancients. But the investigation has not been confined to their superficial philosophers: the most subtle metaphysicians of modern times have regarded them as of importance. Reid, Upham, Stewart and Abercrombie have each devoted careful attention to the subject; while such physiologists as Draper and Carpenter have deemed them worthy of thorough investigation. From lack of proper physiological knowledge, most of the explanatory theories, offered previous to our century, were based on mere speculation and were frequently of the most whimsical nature. Lucretius, the great expounder of epicurean philosophy, believed that the appearances or spectres of bodies, constantly borne in the atmosphere, affect the soul in sleep, causing the strangely incoherent trains of thought characteristic of dreams. Dion Cassius and Cardan referred them directly to divine interference. Smellie advanced the strange hypothesis, illustrative of the superstitious age in which he lived, that there exists a superior being who has control over us, and who, during our sleep, amuses himself by playing on our nerves, thereby producing any sensation he pleases. Baxter, in the same manner, maintains that certain demons amuse themselves by tormenting us during sleep. Haller regarded dreams as mere indications of

disease. Numerous others might be cited, but these suffice to show the variety and incoherence of the speculative theories.

The causes of dreams are now regarded as exclusively physiological, and therefore divested of all their supernatural character. Strange theories, however, are still offered to explain the phenomena. Some phrenologists hasten to find in dreams a powerful support for views altogether derogatory to phrenology as a science. Thus Dr. Gall maintains that dreams cannot be conceived of without the hypothesis of a plurality of organs. When only one organ is in action, the dream is simple, but when more are in operation the dream becomes complex. He believes that dreams often occur which are not excited by external causes, and cites in proof such as those of Franklin and Fontaine, in which mental operations were carried on. To this matter we will recur in another place. Dr. Carpenter, the eminent physiologist, after mature observation offers the satisfactory explanation, that in dreaming the cerebrum is partially active, "a train of thought being suggested, frequently by sensations from without, which is carried on without any controlling power of the mind; which is not corrected, or is only modified in a limited degree by knowledge acquired by experience."

The condition of health and the disposition exercise considerable influence upon dreams. Persons of sanguine temperament are more liable to dreams than those of a phlegmatic turn, although healthy men and animals are seldom so disturbed. Dreams never occur in sound sleep, but only when the rest is broken. During a dream the cerebrum is excited, and the imagination, uncontrolled by the will, has full play; we frequently see most beautiful visions, conceive the grandest projects, or resolve most difficult problems: time and space are annihilated, so that during a few moments we live a lifetime of anguish or of joy. A friend of Dr. Abercrombie dreamed that he had crossed the Atlantic and spent a fortnight in America; on embarking to return he fell into the water, which so frightened him that he awoke and found that he had not slept ten minutes.

In very many cases, as remarked by Dr.

Carpenter, dreams are caused by sensations from without. Under these circumstances the character of the dream does not in all respects correspond to the exciting cause. Dugald Stewart states that Dr. Gregory having applied a vessel of hot water to his feet, fell asleep and dreamed that he was walking up Mt. Etna. Dr. Abercrombie gives an account of a young English officer, so easily influenced by external sensations during sleep, that his companions frequently amused themselves at his expense.

Dreams frequently arise from continued activity of the cerebrum, or "thinking-brain." It is well known that, after awaking from a sound sleep, the first subject presented to our mind is that of which we last thought before "losing our senses." Why, then, may we not assume that, in broken sleep, where the cerebrum is in irregular operation, the subject may be brought up and even clearly discussed? Cases illustrative of this hypothesis are frequent enough, and often are of so strange a character as to be deemed almost supernatural. On one night, during the early days of Pennsylvania history, an ancestor of the writer, an old man far past three score and ten, dreamed that hostile Indians were approaching the settlement. He awoke, but took no notice of it. But the dream was twice repeated, and therefore took such a hold on his imagination, that he aroused the family and, after much persuasion, induced them to fly to a neighboring settlement. By morning the fugitives had reached an elevated plot, from which they looked back and discovered to their horror that the whole settlement, which they had just left, was in flames. This dream, of course, was regarded as a supernatural warning, more especially because no others of the settlers survived. When Newark-upon-Trent was bombarded, one Alderman Clay dreamed that he was warned to move, as his house would certainly be destroyed. He obeyed the warning and removed his family to a place of safety. His house was burned a few days afterward. Both these dreams were remarkable because of their fulfilment. In each case, however, the event foreshadowed in the dream was at any time liable

to happen, and also under the circumstances each person was liable to dream precisely the dream recorded. Doubtless each had frequently before dreamed a similar dream, as the subject was uppermost in his mind. Some circumstances may have intensified the dread of danger at the time especially referred to, which rendered the dreamer more liable to be overcome by superstitious fears. Dreams of like nature, but more simple, are recorded of Condorcet and Franklin. The former states that frequently, while employed in mathematical calculations, he was compelled to retire, leaving his work unfinished. In his dreams the remaining processes and the conclusions of his calculations frequently presented themselves. Franklin frequently solved intricate problems of policy in his sleep, while Coleridge composed one of his most beautiful fragments in a dream. The phenomena of these dreams are easily explained by our hypothesis, and it is not necessary, as Dr. Gall arbitrarily remarks, to admit a plurality of organs, for it is clearly evident, that in every case the dream was caused by previous intense application of the brain to the particular subject. Nevertheless, with wonderful assumption, the phrenologist boldly asserts that here exists a powerful proof of his theory. Sometimes dreams occur, in which matters long forgotten are brought up and clearly presented to the mind. These, we think, aid in proving our hypothesis, since they show that in a dream the cerebrum, being removed from the multitude of conflicting subjects presented during wakefulness, may work with considerable exactness. A remarkable instance of this kind is given by Dr. Binns. A man, during the investigation of a murder committed in the north of Scotland, came forward voluntarily and swore that he had had a dream, in which was represented to him the spot where the pack of the murdered man, a pedlar, was to be found. Search was made, and the pack was discovered. The dreamer was arrested on suspicion of guilt; but on conviction of the real murderer he was acquitted, and the manner in which his dream was explained seems to be satisfactory. Subsequent to the murder, he and the murderer passed several days together

in a state of intoxication, during which time the fact and place of the murder were probably communicated to him. Many persons regarded the dream as a direct interference of Providence for the detection of the murderer; but Dr. Binns thinks Providence would have done much better by exciting the dream beforehand, so as to prevent the murder, and thereby to preserve two lives.

But by far the strangest class of dreams, which have always defied the ingenuity of man and, as yet, remain unexplained, are those in which some strong mental emotion or propensity is imbodied. In these there is a regularity of occurrence, or seeming reality, a lack of confusion found in no others; and these are the ones which, in all ages, even our own, have excited the fears and superstitions of our race. The strange fulfilment of many of these renders them utterly inexplicable in the present state of physiology, though, doubtless before many years have passed, they too will have been completely divested of all supernatural attributes and be as simple as those already discussed.

A strange dream occurred to an acquaintance of the writer. The gentleman was, at the time, at Pike's Peak, where he followed the professions of mining and undertaking. He dreamed that, as he went to his mine, he met the devil. He was alarmed, and anxiously inquired whether he was the object of this visit. The devil replied, "No;" but that he had come for such a one, living some distance below. Having transacted his business and returned, the dreamer again met Satan, who informed him that he had obtained the object of his errand, and then disappeared, leaving the dreamer to awake in an unpleasant state of mind. Early in the morning, our acquaintance received an order to provide a coffin for the person mentioned in the dream. Upon examination, it appeared that the latter had died between twelve and one o'clock, about the time of the dream. The strangest part of the story is, that the person who died was taken suddenly and unexpectedly ill, so that the matter could not have been previously on the mind of the dreamer. The gentleman who narrates the dream is so worthy of

credit, that we place full reliance upon his statement.

Double dreams, or those dreamed by two persons at once, are not of frequent occurrence. Some of these, of a very curious character, are recorded. Mrs. Matthews, in the Memoirs of her husband, the great actor, relates that he had gone to bed, late at night, after performing at the theatre, and was unable to sleep. He had no light and, after tossing about for some time, fancied that he heard a rustling; turning around, he saw his first wife, long dead, standing by the bedside dressed as she was in life. She smiled and bent forward to take his hand, when he sprang from the bed upon the floor, where he was afterward found in a fit. At the same time, and at a very remote distance, Mrs. Matthews had a dream of precisely the same kind, which affected her in the same manner, throwing her into a convulsion. A dream of this character is mentioned by Dr. Binns as having been

preserved by St. Austin. "One Præstantius, desired the solution of a doubt of a philosopher who refused to give it to him. The night following, Præstantius, being awake (or rather supposing himself awake), saw this philosopher stand by and solve the doubt and presently go away. Præstantius meeting him the next day, asked him why, having refused to solve the question the day before, he came at midnight of his own accord and solved it? The philosopher replied, I came not truly, but in *my dream* I seemed to do this to you."

There is a strange analogy between mania and dreams: each is characterized by incoherency of ideas. It appears that the mind being uncontrolled by volition, changes the current of thoughts under the influence of the very slightest circumstances. Frequently two trains of thought occur at once, causing the greatest confusion, and producing symptoms resembling those of mania.

## AN OUTCAST RACE.

[The following extract, from a lecture delivered at a late meeting of the Ethnological Society (London) by W. Martin Wood, Esq., gives an interesting illustration of the decay of races, and tends to confirm one of the leading theories respecting the disappearance of the ancient dominant races of America.—Ed.]

**A**N outcast race yet lingers in the island of Yesso, the most northern portion of the empire of Japan. These aborigines are named "Ainos," or "Mosinos"—the "all-hairy people"—this last being a Japanese term which marks their chief physical peculiarity. Their number is estimated at about 50,000. Yesso is only separated from Nippon by the narrow Strait of Tsugar; but the climate of the island is unpropitious, and its soil is barren, so that the Japanese have only occupied the southern portion. They number about 100,000, and dwell principally in the cities of Mats-mai and Hakodadi. The former city is the residence of the feudatory prince, who holds Yesso under fealty to the Tycoon of Yeddo. To this prince of Mats-mai the Ainos send a deputation every

spring, who present a tribute of dried fish and furs, and do homage, and repeat a formal convention expressive of submission to the Japanese. The Ainos live quite in the interior of the island, and seldom show themselves at Hakodadi or Mats-mai, except when on their embassy in spring or autumn, when they come to exchange their dried fish and furs for rice and hunting-gear. Of a timid and shrinking attitude, these people seem utterly crushed in spirit by their long subjection and isolation. They are short in stature, of thickest figure, and clumsy in their movements. Their physical strength is considerable, but besides that peculiarity, there would seem to be nothing by which an observer can recognize the possibility of the Ainos ever having possessed any martial prowess. The uncouthness and wildness of their aspect is calculated at first to strike a stranger with dismay and repugnance. Esau himself could not have been a more hairy man than are these Ainos. The hair of their heads forms an enormous bunch, and it is thick and matted. Their beards are very

thick and long, and the greater part of their face is covered with hair, which is generally dark in color; but they have prominent foreheads and mild, dark eyes, which somewhat relieve the savage aspect of their visage. Their hands and arms, and, indeed, the greater part of their bodies, are covered with abnormal profusion of hair. The natural color of their skin is somewhat paler than that of the Japanese, but it is bronzed by their constant exposure. The women of the Ainos, as if by default of the extraordinary endowments of their spouses, have a custom of staining their faces with dark blue for a considerable space around their mouths. The children they generally carry in a very singular fashion over their shoulders, and during a journey these tender charges are placed in a net and slung over the backs of their mothers. The children are lively and intelligent when little, but soon acquire the downcast aspect of their elders. Yet these strange people have a history, and though its details are lost, they cherish the remembrance that their forefathers were once the equals, if not the masters, of the Japanese. This is supposed to have been in the sixth century before Christ, at a period coeval with the reign of the first Mikado of Japan. The Ainos were then masters of the northern provinces of Nippon; but they appear to have become dispossessed of their land by the Japanese, and then were gradually driven across the Strait of Tsougar into Yesso. Their final subjugation was not accomplished until the close of the 14th century, when they were completely overcome by a Japanese

general, and compelled to render tribute at Yeddo. As to the origin of the Ainos, we believe the whole college of ethnologists are at fault. Geographically considered, Yesso would seem to belong more to the Kurile Island than to Japan; and the short stature of the Ainos, together with their ordinary method of hunting and fishing, remind one of the Kamtschatkans. Yet those tribes have none of that superabundance of hair which, being so striking a peculiarity of the Ainos, would be participated in to some noticeable degree by any race having affinity to them. Then the chief objection to a northern origin for the Ainos is that they persist in cherishing the tradition that their ancestors came from the west; that is, from some place in the direction of the Asiatic continent. Yet no tribe now found in Corea or Mantchuria bears any resemblance to the Ainos. The interior of Asia, at least all the borders of Tartary and Siberia, have been explored by M. Huc, Mr. Fleming, or Mr. Atkinson, and as yet no hairy people have been found. The language of this outcast race affords no clue to their origin, for there seems no known tongue, certainly none of Eastern Asia, which has affinity to theirs. They have no written characters, but have had their rude bards or sagas, who, in verses orally transmitted, have kept alive the memory of their ancient heroes, and their exploits on mountain and flood. The world will not quite lose these wild strains, for a French missionary, the Abbé Nermet, is preparing a translation of them, which will soon be published.

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### LIBERALITY TO SCHOOLS.

**I**N spite of the devastating influences of a great civil war, there is being developed a remarkable liberality of individuals towards educational institutions. In the year 1864, upwards of a million of dollars was given to our leading colleges; while, doubtless, half as much more was presented to the smaller or less known colleges and schools. Mr. Cornell, of Ithaca, N. Y., has

begun this year in a manner auspicious for education, by offering to the State five hundred thousand dollars to endow a university at Ithaca, requiring the government to give in addition only the land-fund apportioned by Congress for the endowment of agricultural colleges. The offer has been accepted. By this act the People's College at Havana, N. Y., is de-

prived of its greatest support. This, however, is not unjust, since the citizens failed to fulfil their promises.

Harvard University has been the recipient of many noble gifts. Very recently James Lawrence, Esq., gave \$50,000 toward the support of the Lawrence Scientific School; \$21,000 have been paid toward the erection of an alumni hall; \$70,000 have been handed over for the support of sixteen scholarships, to be known as the Bowditch Scholarships; and other donations have been handed in amounting to about \$10,000. It is now the intention of the overseers to establish a theological school in connection with the university, thus completing the institution.

Throughout the whole country the same liberal spirit is manifested. Hamilton College has just received \$6,000 from one of her late graduates. The alumni of the University of New York have undertaken to endow a professorship with \$40,000.

The University of Chicago has just received a noble telescope of 23 feet focal distance, costing nearly \$20,000, from Mr. W. S. Gurnee, formerly of Chicago, but now of New York.

These gifts do honor to the American people, showing, as they do, that even in the midst of civil dissensions, educational interests are not forgotten. They are necessary, since immediately upon the close of the war, a stagnation of business may follow, which might endanger the existence of many colleges, if dependent upon the precarious support of students. Another advantage will, in all probability, accrue from these numerous endowments. Men of undoubted talent, with great love of teaching, and who would honor the profession, have hesitated to enter upon it as a life-pursuit, and have turned aside to law, medicine, or theology. The fear of starvation will soon be removed, and teachers will be abler men hereafter.

#### LOSSES TO SCIENCE IN 1864.

THE year 1864 was more marked by death in the scientific world than any previous year of this century. In January, Heinrich Rose died at Berlin, aged 64 years. In 1822, he became professor of chemistry at Berlin, which position he retained until his death. He was the friend and pupil of Berzelius and Klaproth, so that he was a link between the early and the more advanced schools of chemistry. His discoveries were very numerous, and his works on analytical chemistry opened up a new era in that branch of science. In the same month Dr. Edward Hitchcock died. For a long time he had been professor of geology in Amherst College, and was the State geologist of Massachusetts. He will be especially remembered on account of his investigations concerning the fossil foot-prints in the sandstone of the Connecticut valley. He also wrote a number of elementary scientific works, which attained a great popularity.

Dr. Benj. F. Bache died in Philadelphia, in March. He was a descendant of Benja-

min Franklin, and had been for many years professor of chemistry of Jefferson Medical College. He was associated with Dr. Wood in compiling the United States Dispensatory, and had always taken a lead in all reforms pertaining to pharmacy. He was an able, scientific man, but made few such discoveries as would insure posthumous fame. In April, Evan C. Pugh, F. C. S., one of the ablest and most promising scientific men of America, died at the age of 36. At 19 he was a blacksmith's apprentice, but bought out the rest of his time, and supported himself for a year at a seminary in New York State. After teaching a private school for two years, he went to Europe, where he studied four years gaining the degree of Doctor of Philosophy, at Gottingen. He then associated himself with J. B. Lawes, the British agriculturist, in whose laboratory he solved the question of the assimilability of nitrogen by plants, and demonstrated that Boussingault was right and the French Academy wrong. During the last five

years of his life he was president of the Pennsylvania Agricultural College, and, as the institution was new and scarcely on a fair basis, he devoted his whole time to its interests. His death was a great loss to American science.

In May, the eminent comparative anatomist, Randolph Wagner, died at Gottingen at the age of 59. In 1833 he became professor of zoology at Erlangen; and in 1840, professor of comparative anatomy at Gottingen. He published many valuable tracts on zoology, and contributed largely to the *Handwörterbuch der Physiologie*, of which he was the editor, and also to various scientific periodicals. In September, Capt. John Hanning Speke, the African explorer, died at Bath, by the accidental discharge of a gun in his own hands. It does appear strange that he and Bruce thus died by accident, after surviving all the perils of Africa. It will be remembered that the latter was killed by falling down a staircase as he stepped forward to assist a lady.

In November, Dr. Silliman, the father of American science, died at the age of 85. Though as an investigator he did but little, yet his determination and successful efforts to bring science prominently before the public mind, will cause him to be gratefully remembered. He was graduated at Yale College in 1796, and, in 1804, was there appointed professor of Chemistry and Natural History, which position he held until

1853, when, at his own request, he was released and appointed professor *emeritus*. In 1818, he established the Journal of Science, which he maintained at his risk, although at times it was a burden and never rendered any pecuniary return. He was a man of simple tastes, and attained his advanced age with mind and body in full activity. In the same month, Wilhelm Struve, astronomer royal of Russia, died at Pulkowa, aged 71. His labors and discoveries at the age of 23, rendered the name of Dorpat so illustrious, that the emperor opened to him a wider field of usefulness by founding the Pulkowa Observatory and placing him in charge. By his influence, this observatory has become the scientific authority for all the geographical work done in Russia. Shortly before the death of Struve, his son Otto, had been appointed to succeed him.

In December, Dr. H. R. Schoolcraft, the distinguished investigator of Indian habits and customs, died at Washington in the 72d year of his age. About the same time Professor Boole, of Queen's College, Cork, Ireland, died. He was one of the most eminent mathematicians of Europe; and published a large number of extremely valuable papers and treatises, for which he obtained a royal gold medal from the Royal Society of England. He was a man of extreme simplicity of habits, and undertook his labors merely through love of science and not from any desire for honor.

### PRUDENTIAL ALGEBRA.

A MOST curious expedient was Franklin's moral or prudential algebra, as he called it. When asked by Dr. Priestley how he made up his mind when numerous strong arguments were presented for both of two proposed lines of conduct, he replied:

"My way is, to divide half a sheet of paper by a line into two columns; writing over the one *pro*, and over the other *con*; then during three or four days' consideration, I put down under the different heads short hints of the different motives that at different times occur to me, *for* or *against* the measure. When I have thus got them all together in one view, I endeavor to

estimate their respective weights; and when I find two (one on each side) that seem equal, I strike them both out. If I find a reason *pro* equal to some *two* reasons *con*, I strike out the *three*. If I judge some *two* reasons *con* equal to some *three* reasons *pro*, I strike out the *five*; and thus proceeding, I find at length where the balance lies; and if, after a day or two of farther consideration, nothing new that is of importance occurs on either side, I come to a determination accordingly." He added, that he had derived great help from equations of this kind; which, at least, rendered him less liable to take rash steps."

## AMERICAN EDUCATIONAL MONTHLY.

MAY, 1865.

### HURRY.

FOREIGN visitors speak of the quick movements and the thin, sharp faces of American bankers and financiers. But the reckless haste which perhaps characterizes us as a people, is seen in our educational as well as our financial circles. In the latter we mark some good and some evil results, but these we do not propose to discuss. In the process of mental training, to vary an old proverb,—if hurry comes in at the door, knowledge goes out of the window. Most minds develop slowly, if they develop well. A genius like Pascal, who can work out Euclid at the age of eleven, and write on Conic Sections at sixteen, is found only here and there. From the age of six years to that of sixteen, an ordinary mind needs all the time commonly given to study, to grasp firmly the elements of the different branches of knowledge taught in our schools. Three years longer are surely needed to acquire proficiency in the use of those elements. And then the College or University should teach the scholar the higher paths of learning, and send him forth, not indeed finished, but perfectly furnished, by constant practice of his powers, to take his stand among those who can benefit the world by literary labor. In this way a nation is advanced in the ranks of letters by the ability of her scholars.

But what is the course too often pursued? At six, the child goes to school,

"With his satchel,

And shining morning face, creeping like snail,  
Unwillingly;"

at twelve he "prepares for College;" at fourteen, he enters the University, at eighteen, he takes his profession, and at twenty-one takes charge of our souls, our bodies,

and our quarrels. The last seven years are surely the most important of all, but for three of these, the mind of "Young America" must be devoted to the chosen profession, so that four years only are, in fact, given for much development. We contend that the fruit of this hurry is to lower the grade of general scholarship. We see one out of twenty distinguished for literary attainments, while in England and Germany a much greater proportion is found. And the difficulty can be remedied only by allowing a longer period for the preparatory training, and by elevating the entrance-requirements of College and University to correspond. With some six or seven exceptions, our colleges graduate men who stand exactly on a level with the graduates of Eton and Rugby. Instead of the literary training for four or five years which the English boy then gains at Cambridge or Oxford, our boys plunge into the law or medical school. No one can deny that this condition of things lowers our grade in the ranks of scholars. The facility with which our learned professions are gained crowds them full. Lawyers without a brief, physicians without patients, clergymen without charges,—the land is full of them. We believe that but for the peculiar circumstances of our land,—its wondrous growth and constant change, this surplus of professional men would be more apparent here than in any other country.

Few realize the value of the years between fifteen and twenty-five, for preparation. It is true the "smart boy" may do great things in his profession at the age of twenty-one, but he never can leave the mark he might have made if he had waited. He never can go into those deeper channels of thought, where lie the pearls which will bear a value forever. The mind must have a longer training than we now give it. Money may be made quickly, while the flow of petroleum continues, but literary attainments have not, cannot be gained, without the "midnight oil." Now and then a Minerva comes into the literary world, fully armed from birth. But those

who are of more human mold must wait to brace their armor on, to learn the use of sword and shield, to study the ways of war. Thus the good soldier is formed, and thus the good scholar. Erasmus again and again wished that students would keep in mind a single motto, "*Festina lente.*" We must heed such advice now in this racing age, or lamentable epitaphs will have to be graven on many stones, for the future to ponder, where otherwise might be inscribed, "*Hic jacet, an American scholar.*" For, though it is not described in medical dictionaries, this morbid activity, "*Hurry,*" is with Americans a chronic disease, and its victims in scholastic walks are innumerable.

#### PAPER FROM FLAX.

THE elixir of life was never more earnestly sought, or, certainly, never with more scientific assiduity, than has been an adequate source of supply from which material for the manufacture of paper could be economically drawn. In the various processes of investigation, the vegetable kingdom has felt the tread of nomadic feet in every province. Woody fiber and everything having its semblance have been placed on the rack of inquisition bruised by the pestle of experiment, dissected under the microscope, and, in mangled fragments, made to show their capacity to appease the cravings induced by the march of improvement. For a long period, however, the most economical and most readily obtainable supply has been the worn out, cast off, tattered garments, the strings and patches, clippings and shreds, brought together by the searchings and savings and pilferings of those who in diverse capacities thus fed the paper-mill. In this work, Italian lazaroni, French chiffonniers, and American ragpickers, have long had an important share. Hence, in the fabrication of the most delicate sheets that grace the *escritoir*, the initial process has been the removal of the dirt, the filth, the miasma, and the germs of pestilence

with which the staple material was impregnated,—the purification being effected through means which sensibly impaired the health and to some extent shortened the lives of the operatives most immediately engaged in the process.

Linen, or flax, has always been a desirable textile since the manufacture of paper became an art. The handsome, smooth, firm leaves of antique tomes, coming down from the first era of typography, owe half their beauty to the fact that linen was then the manufacturer's "raw material." The use of cotton, at a later period, was merely a matter of economy, when Whitney's invention, the cotton-gin, afforded an inferior but cheaper substitute. The use of flax which had not undergone manufacture and bleaching, in the form of linen, has been repeatedly essayed, but adequate means of separating the proper fiber from the woody matter seemed unattainable. A spotted, tawney, coarse fabric was for a long time the only product secured.

The prospect of an abundant, unexceptionable source of supply for the manufacturer of paper has at last, however, been found,—in the rejected flax fiber. A dresser or brake, recently invented, designed to prepare flax for general uses, was found to detach a greater proportion of woody particles than any brake had before removed, and to make the true fiber valuable to the paper-maker. Further improvements were soon effected, having the preparation of flax for the paper-mills as an especial object. The inventors now state unequivocally, that, by their perfected dresser and a complication in which these brakes are used, all obnoxious matter is thoroughly removed from the flax fiber, and a pulp can be made from it free from color and uniform in quality and general characteristics, so that the finished paper, far superior to that produced from ordinary materials, can be put in market at less than usual cost. On examining this new brake we brought away some of the flax which had been subjected to its operation, and subsequently compared it with

some obtained from the ordinary brakes. The latter, on reducing it to a condition similar to paper-pulp, was a coarse, yellow-spotted substance; the former was of fine, even texture, white and spotless. It is not improbable that the results anticipated by the inventors will be realized. This application of flax is certainly desirable. The annual importations of paper material amount to nearly eighteen millions of dollars. Our Western States are capable of producing flax in an abundance that would

fully supply the demand. Its extensive cultivation on the prairies has been hitherto for the sake of securing only the seed. The straw has been cast away, there being no means of utilizing its valuable fiber without transporting the gross bulk at a cost which made the trouble unremunerative. In the effort to practically and advantageously employ flax as a staple in the manufacture of paper, a great advance towards consummation has evidently been effected.

## EDITORIAL CORRESPONDENCE.

CHESTER, Vt., April 13, 1865.

*Waste of Letters.*—*Cicero's Reporters.*—*Pitman's Shorthand.*—*Phonographic Principles.*—*Their Applications.*—*Phonography in Schools.*

YOUR editorial, Mr. Editor, on "Waste of Letters," and the letter called forth by that article in February, are the expression of a demand for a brief system of writing which must and will be met.

The cultivation of the vast grain-fields of the West, together with the facilities for the disposal of their product afforded by railroad and telegraph and the ocean steamships, demanded something better than the sickle and the cradle: the "reaper" answered the demand. The exigencies of the present war required the means of storming earthworks from the sea or river, and the "Monitor" appeared. Neither is an improvement upon former methods. The reaper is not a cradle worked by horsepower, but a set of pairs of shears. The Monitor is not a ship in armor. So the telegraph is not a modification of the wind-mill, or a system of pennons, but an original conception, differing in everything—save in the object to be accomplished,—from the bungling contrivances of former days.

Now all these means of progress have multiplied the efficiency of civilized men a million fold. It is estimated that the labor of one hundred millions of men is performed by machinery in Massachusetts, in a single year. The economy of time in one department demands the economy of time in another; and this economy in relation to an employment which is more intimately connected with these and similar improvements than any other, must inevitably come. Now, my question is,

does the view suggested in the two articles referred to, look for this improvement in the right direction; or does all analogy point another way?

Your correspondent makes a suggestion which occurred to a freedman of Cicero nearly two thousand years ago, who succeeded in reporting the speeches of the orator by using portions of the Roman letters, with the addition of certain arbitrary signs, and sharing the labor of reporting with several others, who were to divide among themselves sentences and parts of sentences, each having no concern for that which was assigned to the others, save only that his own fragments should come in at the proper places, when the different parts should be brought together to be transcribed. From that day to this there have been repeated attempts to carry to perfection the art of rapid writing, the element of rapidity being the main thing, and legibility secondary. It remained for Isaac Pitman, of England, to devise a system of shorthand which should be also legible, when the memory of the thought which it expressed should have passed away. And this, like most great improvements, was based upon a simple idea. Every mark shall be the expression of a sound. Every symbol shall be simply an abbreviation, which can be easily supplemented by additional strokes.

In the development of this idea he had the advantage of nearly two thousand years of past experience. The assigning of different sounds to the same stroke or dot, according to its position above or below the line of writing,—the use of suffixes and affixes, which take their phonetic character from their place at the beginning, or end of a word, and many similar expe-

dients, have been gathered from other systems; but they have been brought together with a harmony and beauty which makes his system hardly less a science than an art. For example, *t* is represented by a perpendicular line drawn with the ordinary stroke of the pen, *d* with a heavy stroke corresponding to the increased effort of the organs in its utterance. Again, it is noticed that the final *d* or *t* cuts off the sound which would otherwise have been prolonged. Thus a curve, indicating *n*, with the vowel long, and *e*, a mere dot, would spell knee: a curve of half the usual length of the letter with the same vowel would spell neat—a similar curve, half-length and thickened, would spell need: I say would spell these words for every sound in each is as really and fully indicated as in common print.

A number of the words used in common speech are so often repeated as to make up a large portion of any written page. These are represented by signs, which are, however, only abbreviations, no more arbitrary, many of them by no means as much so, as those at the end of the spelling book. With these the eye soon becomes as perfectly familiar as with the most common abbreviations in common print.

Compare now the brevity of the system with the ordinary style of writing: take *e. g.*, the word "commanding" requiring thirty-one distinct strokes of the pen, and one dot. It is written in phonography by one heavy curved stroke in the form of a crescent, with three dots, one before and one after, for "com" and "ing" and the other just above, indicating the vowel sound of the penultimate syllable.

The system in the corresponding style is perfectly legible, and is now used by thousands as a medium of correspondence. I am, myself, in common with multitudes of others, in the habit of reading sermons from the pulpit written entirely in the phonographic character. It is true that the system is somewhat difficult of acquisition. It cannot, from the nature of the case, be mastered as readily as common script, which is but a slight modification of forms with which the eye has become thoroughly familiar. But, with our present school facilities, why may it not be made a general study; or, at least, why should it not be made an essential part of the education of every man of business? If, from a business life of twenty-five years, at least one-fourth of the time devoted to writing could be saved for other business, would this not warrant the appropriation of a liberal number of weeks or even months, at the outset, to the acquisition of a system by which this saving is to be

accomplished? If the train is an hour behind-hand I may possibly lose no time by proceeding on foot to the next station; but if I am to go a hundred miles it will be better to wait half a day, than to trust to the ordinary method of conveyance.

I believe that phonography can be taught in our common schools, and that the discipline involved in its acquisition will itself repay the time and labor necessary to master it; that it ought, and that it eventually will become an essential part of every good business, and liberal education. The time spent in our academies and higher schools upon studies which are pursued solely as matters of discipline or accomplishment, is abundantly sufficient to secure the knowledge of this art, which while it is a most admirable means of training the memory, the ingenuity, and especially the power of attention, is in itself an accomplishment of incalculable value. C. C. T.

Boston, Mass., April 4, 1865.

*A Pedagogical Experience.—A Refractory Pupil,  
—Teacher Indicted.—Restricted to Jail-Limits.*

**MR. EDITOR,**—The article on "Pedagogical Law," in your March number, reminds me of a circumstance that occurred in New England a few years ago.

I was in a commercial school in Hartford, in 1863. A young man applied for instruction in writing. After a little acquaintance I learned that his situation was slightly embarrassing. He was, in fact, on jail-limits, from inability to pay a judgment and the costs of a trial for the punishment of one of his pupils.

The facts he detailed as follows. He had taken a district school near Hartford. One of his pupils, a coarse brutal fellow, had interfered with the order of the school, until he found it necessary to punish him. The boy refused to take off his coat, and he tore it off. He then gave him a moderate correction with a whip. The teacher was indicted on the charge of assault and battery. For three years this trial had been carried on without final settlement.

This was the result. For faithfully defending the rights of a teacher this young man had been kept from his labors for three years. His means had been absorbed. His health had been shattered by anxiety. He had been disgraced and treated like a felon, at the instigation of a dolt. And not a teacher in this enlightened city had troubled himself to inquire into his case, or see that he had justice. Surely, I said, the days of barbarism have not yet passed.

I must leave these facts as he gave them to me. I could not doubt their truth. The

young man went to his friends in Massachusetts, and I do not know whether he has ever recovered from the effects of this malignant persecution. If teachers were true to themselves and to one another such things would seldom be attempted. I did not wonder that a bad man, the father of the pupil, should indulge his passions in this way; but I did wonder that a community of teachers could look upon such persecution without seeing that their own interests were involved. This teacher had been imprudent; but he had tried to do his duty,

and had really performed a praiseworthy act in enforcing discipline. What teacher has always been so prudent, in rude places, where there was no public sentiment to enforce discipline, as to be beyond criticism? Have boors all the rights, and teachers no license?

This subject deserves attention; and I for one, Mr. Editor, hope that you will carry out the design fully, and give us a digest of pedagogical law that will inform us of our *rights*, as well as our duties.

D. P. L.

## NOTES AND QUERIES.

### NOTES.

*License to Teach English.*—The original paper of which a verbatim transcript is here given, is filed among the papers in the office of the Secretary of State. C.

*"The Governor's License granted unto John Shutte, for the teaching of the English Tongue at Albany."*

"Whereas the teaching of the English Tongue is necessary in this Government; I have, therefore, thought fitt to give License to JOHN SHUTTE to bee the English schoolmaster at Albany: And upon condition that the said JOHN SHUTTE shall not demand any more wages from each Schollar than is given by the Dutch to their Dutch Schoolmasters. I have further granted to the said JOHN SHUTTE that hee shall bee the onely English Schoolmaster at Albany.

"Given under my hand, at Fort James in New York, the 12th day of October, 1665.

"RICH'D NICHOLS."

*Fall.*—The word *fall*, used instead of autumn, is generally considered as an Americanism, and inelegant. It is, however, in this sense, local in England, and was so used by William Penn in one of the earliest letters written by him in America. The word is as poetical and appropriate as "spring," is more expressive than "autumn," and should never have been thrust out of the Saxon seasons. S.

### QUERIES.

*Hedge Schools.*—In English works I frequently see allusions to "hedge schools." Does this phrase have any specific meaning? Is the origin of it known?

F. HAZEN F.

[This term had its origin at the time when the Irish schoolmaster was regarded

by the British government as a felon,—to teach any Catholic, being a penal offence. To elude the officers of the law, and to facilitate escape in case of detection, the plan of meeting for instruction at the sides of hedges was frequently adopted. It soon became customary to bring a turf to make comfortable these subterranean institutions, which becoming somewhat systematically managed acquired the name of hedge schools. The term is now used in its original signification, and, occasionally, as a contemptuous appellation for a rural or inferior school.—Ed.]

*On; Upon.*—These words seem to be used indiscriminately by some writers. Is the practice justifiable?

SALTONSTALL.

[Custom tolerates such expressions as, "He fell *upon* the ground," "Send *down upon* our bishops," "Pour *upon* them the continual dew of Thy blessing." But the ancient form of "*upon*" was *uppan*, and denoted elevation. "*On*" may be used to imply either rest or elevation; "*upon*" should be employed only in expressing upward motion and elevation.—Ed.]

*Further; Farther.*—Which of these forms is correct? If both are correct which should be preferred?

SALTONSTALL.

["*Furthest*" should have preference. In Harrison's treatise on the English Language, authorities are cited showing that the word *fer* was formerly used in the sense of the modern term *far*, and that from *fer* was derived the superlative *ferrest*, and that the comparative would, if regularly formed be *ferrer*; *fer*, *ferrer*, *ferrest*. The word *forth*, used by Chaucer, is a different word and derived from *forth*, a term still holding its place in the

English language, though formerly written *further*. The word which now fluctuates between *further* and *farther* ought, therefore to be written *farther*. Custom makes it *further*. "*Far* is a corruption of *fer*,

leading to other corruptions, *farther* and *farthest*, in the place of *fer*, *ferrer*, *ferrest*, now obsolete. To go *forth* implies no particular distance; to go *far* is so far definite that it excludes nearness."—Ed.]

## EDUCATIONAL INTELLIGENCE.

WASHINGTON, D. C.—We are indebted to J. Ormond Wilson, Esq., for the twentieth Annual Report of the School Board of the city of Washington. This document contains one hundred and twenty-six pages, and is the most complete report of the kind which we have yet had the pleasure of seeing. The reports of Committees are really elaborate, well written papers upon the subjects discussed.

The Wallach School Building accommodating 600 pupils was completed during the past year. This structure is most creditable to the taste and skill of the "Special Committee." The house and grounds are not merely commodious and convenient; but they are made attractive to the eye, so as to allure and captivate at that period of life when pleasure is sought and keenly appreciated. The committee wisely remark that "we cannot lay too much stress upon the importance of making the surroundings of childhood such as are calculated to develop all the nobler faculties and emotions of our nature."

The aggregate number of pupils on the roll books is 4,895. The method of marking is plain, strict, and accurate, and rivals the best systems of our Eastern cities. Under the present intelligent and conscientious management the public schools of Washington cannot fail to attain a high position.

MAINE.—A Normal School was opened at Farmington the 24th of August last, with 30 students—in the autumn term 59, and in December, 35. The prospects of the school are most hopeful. A. P. Kelsey, Esq., is Principal.

KANSAS.—A Normal School is about to be opened at Emporia. Mr. L. B. Kellogg, a graduate of the Illinois University, and for two years the principal of the model school there, is to be Principal.

IOWA.—There are in this State, of children between 5 and 21 years, 294,912, of whom during the last year 210,569 attended school. There are 6,628 schools, and 8,955 teachers—males, 2,815, females 6,140. Average wages per week—males, \$6.28, females \$4.40. Paid teachers during the year, \$686,672.62. The results of the year are reported as highly satisfactory.

MASSACHUSETTS.—From the annual Report of the Massachusetts State Board of Education it appears that the present number of schools is 4,765; scholars, 241,644; increase of the schools since last year, 49; of scholars, 3,263; average attendance, in summer, 177,394; decrease, 2,668; winter, 188,669; decrease, 872. The average wages of male teachers was \$46.73 per month, females, \$19.37; amount raised by taxes for public schools, \$1,536,314.31; increase over last year, \$102,299.11. Voluntary contributions to prolong public schools and for apparatus, \$27,259. The average expenditure for each scholar between the ages of five and fifteen years, was \$6.95. The increase is an advance of \$35,813.18 beyond the largest annual appropriation ever made by the citizens of the State for public schools.

The number of persons attending the State Normal Schools was 582.

ANDOVER SEMINARY.—The present endowment, and the wants of this Seminary, are thus stated by the treasurer:

The Seminary has at present an endowment fund safely invested and yielding interest amounting to.....	\$550,000
The public buildings, five professors' houses, lands, libraries, etc., are valued at.....	200,000
The library fund is.....	20,000
The beneficiary funds.....	60,000

Total amount of present endowment... \$830,000

The foundations of a new library building, and of a new chapel are laid, requiring.... 50,000

For increase of salaries, of beneficiary fund, a sixth professor, lectureships, fellowships, and salary of librarian, there will be needed..... 120,000

Making a grand total of..... \$900,000

VANCOUVER ISLAND.—The Legislative Committee on Education have presented a report, of which the two essential clauses are the following: "That there should be established in this colony a system of free schools, conducted by thoroughly competent trained teachers, wherein the intellectual, physical, and moral training, would be such as to make the schools attractive to all classes of people;" "That in a com-

munity such as this, where religious opinions are so diversified, and where the benefits of a well devised educational system should be extended to all, the reading of the Bible or the inculcation of religious dogmas in free schools would be unadvisable." The report has been discussed in the Assembly, and an expression of opinion given by the members, generally favorable to the view of the committee.

—Girard College, in Philadelphia, has five hundred and sixty three pupils, each

of whom costs one hundred and eighty dollars a year. In 1857 there were only two hundred and ninety-five pupils, and each then cost two hundred and fifty-two dollars. The number of applications is increasing, on account of orphanage produced by the war.

—The Regents of the Smithsonian Institution have decided to rebuild the portions of the building destroyed by fire, and to make them fire-proof, at a cost of \$120,000, which will be paid from the surplus fund of the institution.

### CURRENT PUBLICATIONS.

NEARLY a year has elapsed since the appearance of the New Dictionary.<sup>1</sup> The diversity of opinion respecting it has had free expression. Some assert that it is no longer Webster's Dictionary; others say or insinuate that it is defective in its appeals to authorities, that it supplies the student with no means of tracing the history of a word, that the "authorities which are adduced seem to have been pitched upon by accident." We do not declare the work perfect in every detail, but we must confess our continual amazement at the fullness of its vocabulary, the clearness, precision, and comprehensiveness of its definitions. The great increase in the vocabulary of this monument to American learning may be shown in the facts that the first Dictionary, by Noah Webster, published in 1806, contained only 12,000 words; his great American Dictionary, published in 1828, nearly 80,000 words; the first Pictorial edition, issued in 1859, about 100,000 words; while this *new illustrated edition* contains more than 114,000 words, or ten thousand more than any other dictionary of the English language.

In the present thorough revision of this great work, under the general supervision of Professor Noah Porter, of Yale College, more than thirty eminent scholars have been employed, several of them during many years. Among them were those who have attained to great eminence in different departments of learning, both in America and in Europe. We speak of this revision as *thorough*, because we find that it has thousands of new words, and that many of the definitions of the old ones have been

carefully rewritten, retaining Webster's most valuable features, while the new significations which good present usage attaches to these words have been added, so that this work is emphatically the best defining dictionary of our language. The revision also extends to the etymology, orthography, and pronunciation, thus embracing an entire reconstruction of the whole work.

In respect both to orthography and pronunciation, its conformity to the usages of the best speakers and writers of America and England, renders it unequalled as a standard in these particulars.

Those valuable synonyms of Dr. Goodrich, which occupied some seventy pages before the vocabulary of the first Pictorial Edition, have been incorporated in the work, each under its appropriate word. Besides these, there have also been added ample lists of synonymous words, without explanations. There are more than *three thousand illustrations* to aid in communicating clear ideas to those objects which words alone cannot present. These are arranged in the body of the vocabulary, each with the word to be illustrated, and are also grouped together in classes at the end of the volume, with references to the pages where the descriptions may be found.

Among other new and valuable features, are the "Explanatory and Pronouncing Vocabulary of the Names of noted Persons and Places, and the Fictitious names of of Writers;" "The Etymological Vocabulary of Modern Geographical and Biographical Names;" "Common Christian Names, with their Equivalents in Several Languages;" "and a Brief History of the English Language," by Prof. James Hadley.

But, it may be asked by those who have not examined it, or by those who have not considered the real character of a complete

(1) WEBSTER'S UNABRIDGED DICTIONARY. New Illustrated edition. Thoroughly revised, and greatly enlarged and improved. By CHAUNCEY A. GOODRICH, D. D., LL. D., and NOAH PORTER, D. D. Royal quarto, 1,840 pages. Published by G. & C. Merriam, Springfield, Mass. 1864. Price, \$10 00.

lexicon—What is the need of another dictionary? Let us consider the relations properly existing between a living language and the standard dictionary which represents the meaning of the words constituting the language.

The language of a people is the summary of the thoughts and judgments of their forefathers, and a repository of the civilization of the nation to which it belongs. Living languages are in process of continuous creation. They are daily molded, to express the thoughts of the times, hence are never finally completed. Dead languages are stationary, recording only the thoughts of the past stage of development in their respective nations. As long as a language remains a living one, and is daily used to symbolize the ideas of the people employing it, new words will be required for new ideas; and as some older words fall into disuse, and others materially change their significance by embracing new meanings, the language must be constantly undergoing changes. A dictionary which has been published twenty years without revision, cannot represent the language as it really exists. It may be a complete record as it was, but it is impossible to confine a language within the lids of a dictionary. A dictionary may contain words and definitions; but if those definitions do not embrace the ideas symbolized in the present use of the words, it cannot truly be called a dictionary of the living language, nor can it be of much value, except as a record of the ideas of the past.

Great generalized ideas have recently been symbolized in our language; and they are becoming incorporated into the legislation of our nation. The spirit of progress in our country, our people, and our language, demanded an American dictionary which, in addition to all the accumulated treasures of the past, should represent the living, current ideas of to day. Such a work we now possess in Webster's New Illustrated Dictionary—a fit cotemporary with the dawn of our new national life.

John Milton, the blind bard, was not a churchman nor a royalist. He opposed prelacy and episcopal prerogatives; he had no sympathy for dynasties and regal powers. But the stoutest defenders alike of Church and State have acknowledged his sway, and one would not be accused of extravagance of expression in saying that his writings will be read as long as the Bible finds readers, or monarchy retains its crown. To the unquestioning belief in his poetic inspiration which is everywhere manifested, we, however, can not devoutly yield without a few

slightly heretical reservations. Many persons obtain their literary *credo* as they do that of their religion and politics—from their parents and schoolmasters; they acquire their poetical principles as they do their homesteads and walking-sticks—by hereditary descent. Spencer, Shakspeare, Milton, Pope, even the modern Byron, are often spoken of with enthusiasm by those who know scarcely anything of their writings. Their works are not invulnerable. There are many loopholes and many weak places accessible to the shafts of criticism. Fame, with good reason, has with her own trumpet-note sent forth the name of Milton to echo among the ages, and many now repeat the name only because they have so long heard these reverberations,—not because they often hear and are enraptured by the utterances of the deep-voiced bard himself, who, sightless and solitary in his ordinary circuit, could unaided scale the heights of Parnassus, and, while pointing myriads to primeval light, commune with the hosts of a boundless realm. Henceforth, those who are not familiar with Milton will be without excuse. No edition of his works possesses a combination of such admirable features as are shown in the unique volume\* of Charles Dexter Cleveland. It has attractions for the superficial, the poetical, and the most critical readers. A fine specimen of handsome and correct typography, it invites perusal. Teeming with explicatory remarks, critical notes, indices, and similar matter, it encourages the most indolent. For the student or critical reader it has especial interest. For it has no traces of the haste, incompleteness, and lack of taste, judgment, and research which characterize so many literary "compilations," "editions of the poets," and the like, numerous in every library, and, it might be said, on every table. It is a scholarly work, the result of much labor, prosecuted to completion. We have heard of Professor Cleveland only as one who had been a successful teacher, and was as successfully engaged in strictly literary labor; but in this volume he has given us an auto-photograph which enables us to see his moral and intellectual features. There is observable not only a correctness of judgment in deciding several points in his own annotations, or in selecting those of others, there is not only a burnished finish to his work, which could come only from the hand of a skillful workman, but

(\*) THE POETICAL WORKS OF JOHN MILTON, with a Life of the Author; Preliminary Dissertations on each Poem; Notes Critical and Explanatory; an Index to the Subjects of Paradise Lost; and a Verbal Index to all the Poems. By CHARLES DEXTER CLEVELAND. Author of the Compendiums of English, American, and Classical Literature. Philadelphia: Frederick Leypoldt. Large 12mo, pp. 688. Price \$3.

there is also an evident spirit of integrity, a conscientious painstaking, and a devotion to his task which in this age of bookmaking must be equally rare and gratifying.

We take pleasure in welcoming a practical work on philology. Prof. Marsh's little volume<sup>3</sup> should be introduced into every school, in which pretension is made to thorough drill and scholarship. The system laid down is simple and admirable. The pupil is required to write an essay on some author according to a plan given in the book. A series of questions is given; and the student if he would write intelligibly, is compelled to investigate the whole subject very thoroughly. In this way not merely is his power of composition strengthened, but his store of useful information is very greatly increased. We heartily agree with Prof. Marsh, when he says that the habit of investigating and writing out results, quickens thought ninety-nine times as much as beating the brain for original brilliancies.

A new edition of Prof. Mitchell's early lectures<sup>4</sup> on the planetary and stellar worlds has been published. To praise any of this author's works would truly be a work of supererogation. The beautifully simple style of his writings renders them interesting to all; and, if any desire a royal road to an elementary knowledge of astronomy, we recommend for perusal a set of General Mitchell's works. To this man, who elevated himself from the lowest position in life to that of an honored man in science, astronomy owes much of its success in this country. The preface to these lectures gives an interesting account of the disheartening difficulties encountered and overcome by him, while endeavoring to establish the Cincinnati Observatory.

A writer who is too modest to give his name, has undertaken to teach us what is right and wrong, in a little book<sup>5</sup> of seventy pages, to which is added about a score of pages of simple and long drawn out questions. The table of "Contents" is immense—five pages. Some of our duties, however, are clearly set forth, and the book may be used with profit by many teachers and heads of families.

Of making text-books there is no end. Every instructor thinks he perceives the

defects of every other teacher and so inflicts a new book upon the too patient public. Arithmetics and grammars are generally the results of this delusion, and consequently they are innumerable. We are troubled when a new one appears. However, there is always room for a good book. Mr. Silber has given us a very good little volume,<sup>6</sup> just the thing for beginners. It is carefully compiled; not so concise as to be repulsive, nor so detailed as to be heavy. We recommend it to the attention of teachers, although we cannot entirely approve of the pronunciation offered in the work.

To aid in making teachers and pupils perfectly familiar with the Constitution of the United States of America, with all of the recent amendments, it has just been published in a neat, convenient little volume. The Declaration of Independence is also given in full. The book is well bound in cloth, and can be carried in the pocket. The price is so low that no one can have excuse for being without it.

Everything tending to beautify the school-room is profitable to pupils and teachers. Sherwood's School Mottoes<sup>7</sup> for this reason are valuable, and should appear on the walls of the school-room. They consist of fifteen sheets, on which are printed in large bold letters (which can be read, when fastened upon the walls, from every part of the room) such mottoes as "I am Early;" "I will Try;" "Dare to do Right;" "Study first, Play afterward;" "Good Scholars must be Thorough in Every thing;" "Every day in your Life is a Leaf in your History;" "A fault Confessed is half Redressed;" with many other appropriate mottoes.

While text-books in general have greatly multiplied of late years, Physiologies have not increased proportionately. There is now room for a new and popular school-book on Physiology, adapted to the common schools. Children cannot be taught too early how "fearfully and wonderfully" they are made; they cannot too early become familiar with the great principles of life and health. We have just had the privilege of examining some early sheets of a Physiology now in preparation, and to be ready next month. Dr. Lambert is well

(3) METHOD OF PHILOLOGICAL STUDY OF THE ENGLISH LANGUAGE. By FRANCIS A. MARSH, Professor, etc., in Lafayette College. Harper & Brothers. 12mo, pp. 112. Price, \$1.50.

(4) THE PLANETARY AND STELLAR WORLDS. A popular exposition of the great discoveries and theories of modern astronomy. In a series of ten lectures. By O. M. MITCHELL, A. M., Director of the Cincinnati Observatory. N. Y.: Charles Scribner. 12mo, pp. 326. Price, \$1.75.

(5) LESSONS ON THE SUBJECT OF RIGHT AND WRONG, for use in Families and Schools. Boston: Crosby & Alinsworth. New York: Oliver S. Felt. Price, 75 cents.

(6) PROGRESSIVE LESSONS IN GREEK, together with notes, and frequent references to the grammars of Sophocles, Hadley & Crosby. Also, a Vocabulary and Epitome of Greek Grammar for the use of beginners. By WM. B. SILBER, A. M., New York Free Academy. Appleton & Co. Pp. 79. 12mo. Price, \$1.00.

(7) CONSTITUTION OF THE UNITED STATES, with all the Amendments. Also, the Declaration of Independence. N. Y.: Schermerhorn, Bancroft, & Co. 24mo. Price, 25c.

(8) SCHOOL MOTTOES FOR THE SCHOOL-ROOM WALLS. New York and Philadelphia: Schermerhorn, Bancroft & Co. Price, by mail, 75 cents.

qualified to make a good book on this subject. He has been long and practically identified with educational affairs, in lecturing to schools on Physiology, his favorite study. The publishers are illustrating the work in a liberal manner, and it surely promises speedily to take a high position among the first-class school books of the age.

SILLIMAN'S JOURNAL for March contains a continuation of Prof. Heinrich's "Planetology;" Terrestrial Magnetism, by P. E. Chase; the first part of a paper on the Chemistry of Natural Waters, by T. Sterry Hunt; a memoir on Shooting Stars, by H. A. Newton; Remarks on the Carboniferous and Cretaceous Rocks of E. Kansas and Nebraska, by F. B. Meek; together with various other papers and the invaluable summary of scientific news. As this magazine is the acknowledged exponent of American science no honest instructor can

well do without it. It is published at New Haven, Conn., at \$5 per annum.

BARNARD'S AMERICAN JOURNAL OF EDUCATION, for the quarter ending March, 1865, appears late. It is well worthy a careful reading. Its frontispiece is a portrait of Samuel P. Bates, the worthy and popular Deputy State Superintendent of Schools in Pennsylvania. Its leading articles are: The American Doctrine of Public Instruction; Naval Education in the United States; Competitive Examinations for Admission to our National Schools; National Literary and Scientific Convention in 1831; Naval Schools in England; Public or endowed Grammar Schools of England; Historical Development of American Education; English Teachers and Educators; English Pedagogy; National Teachers' Association in 1864; English Grammar; Liberal Education; College Professorships of Pedagogics; National Bureau of Educational Statistics; Associations for Educational Purposes; Object Teaching. Quarterly, \$4 per annum, or \$1 each.

© PHYSIOLOGY FOR SCHOOLS. By Dr. LAMBERT. New York: William Wood & Co., Publishers.

### MISCELLANY.

—Henry the Fifth was a learned prince, but he had the bad habit of borrowing books and never returning them. After his death a petition was sent to the Regency by the Lady Westmoreland, his relative, praying that her *Chronicles of Jerusalem* and the *Expedition of Godfrey of Boulogne*, borrowed of her by the late king, might be returned. The prior of Christ Church likewise, in a most pitiful complaint, said that he had lent to his dear lord, king Henry, the works of St. Gregory, who had never restored them to him, their rightful owner.

—Japan is a country of paradoxes and anomalies. They write from top to bottom, from right to left, in perpendicular instead of horizontal lines. Their books begin where ours end. Their locks turn from left to right. Their day is our night. Shops go to customers. People sit upon their heels. Horses' heads are where their tails would be in an English stable, facing the entrance, the food hung from the roof in a basket. There old men fly kites, while the children gravely look on; the carpenter uses his plane by drawing it to him; their tailors stitch from them; they mount their horses from the off side; the bells to their harness are always attached to their hind-quarters instead of the front; ladies black their teeth instead of keeping

them white; their hair is turned back from the face, which is elaborately painted and powdered; and their anticlerical tendencies are carried to the point of interfering not only with the grace of movement, but with all locomotion, so tightly are the lower limbs, from the waist downward, girt round with their garments. Top-spinning is followed as a profession. They indulge in frequent and loud exultations, as evidence of a good meal. Their pocket is their sleeve. They wipe the face with a nice square of paper, and carefully fold the envelop into the sleeve, or give it to an attendant to throw away. Their music is without melody; their landscapes without perspective, light or shade; their figures without drawing—mere crude colors and grotesque forms dancing in mid-air, without ground to rest on. They have bank-notes of the value of a farthing. They have long perfectly understood the utilization of sewerage, and the manufacture of paper, not from rags, but from the bark of trees, of which they have sixty-seven different kinds, all with different uses. They use no milk or animal food; horses and oxen and cows are employed for purposes of draught only; they have no sheep nor pigs; the flowers have no scent, the birds no song, and their fruits and vegetables no flavor.

—A correspondent of the London *Mining Journal* thus disposes of the hermetically-sealed toad business. He says: "Your Derbyshire correspondent in last week's journal, refers to the alleged discovery of a live toad in a solid block of Cannel at the Ravenwood colliery, St. Helen's. This to me is like all other fabulous reports. I would first ask if the man is one of those who get an extra shilling by such tricks; for it looks too much like a trick, when he says his attention was called to the fine appearance of the piece of coal. He then broke it and found it hollow, and then takes it with him to the surface, and finds a toad in it. It is not unusual to find stones hollow. Then what could have induced him to carry it to the surface? I have myself twice had this attempted to be practiced on me. Hollow stones are very convenient to play this trick with. I have seen frogs put into a hole not half the size of a frog's body. I was in Wales a few months since, where some men were sinking a shaft, half in solid rock, and half in old quartz. There were four Scotch gentlemen with me; the men blasted a hole, and in a few moments one of the men came up with a living frog, and said the hole had thrown it out. The Scotch gentlemen were so delighted with the discovery that orders were given for something to be got to convey it to Scotland, and the man was about to get a reward, when I interfered, and asked them if half the shaft was not in old rubbish. I had seen it, and they were compelled to acknowledge it, as Mr. Mackenzie, the engineer, was one of the party, and would have gone down and proved it. The smoke of the powder soon caused the frogs near to get out of the water, and this one jumped up on the rock. Miners now-a-days are quite up to all these maneuvers to get a ready shilling. I thought to have heard no more of frogs or toads in stones after what Mr. Hunt openly stated as to himself and all the committee of the Exhibition being misled when they allowed the frog to be put in the lump of coals there as being found in a lump of coal in a mine. Mr. Hunt stated at a public meeting that they were duped, and he much regretted ever consenting to its being put there. It is only narrow-minded men who allow rogues to dupe them in such a way."

—The last living man of a race should be a study for ethnologists and anthropologists. The *Hobart Town Mercury* says: "At the last ball at Government house, Hobart Town, there appeared the last male aboriginal inhabitant of Tasmania. He was accompanied by three aboriginal women, the sole living representatives of

the race beside himself. We may therefore look upon this individual not only as the last of his race *in esse*, but also *in posse*. In this there is something very serious, if not very affecting. What was to have exalted them has tended to their debasement. What was to have been a source of prolonged life to them as a people has led to their speedier extinction. From their first contact with the whites until their final separation the tendency was downward, and it was then too late to arrest the progress in that direction. It is not in human nature to be recuperative beyond a certain point. The number of the aborigines in the first decade of the present century has been variously estimated; by some at 7,000, by others at 4,000 to 5,000 only."

—A laugh has been gotten up at a Paris club at the expense of a not over-intelligent young French traveler, who has been making the grand tour of London during the most promising months for seeing life and fashion. He lodged at a house where no French was spoken, and he spoke no English, except that which is very comprehensible to an English lodging-house keeper's mind, namely, putting gold into his hand. The joke against him is, that his letters to his friends, during this momentous visit, were dated, "No. 4 Billstickers Beware, Leicester-square." This he declares was the name of the street he lived in.

—It is a notable fact in criminal statistics that no fat man was ever convicted of the crime of murder. Stout people are not revengeful; nor, as a general rule, are they agitated by gusts of passion. Few murderers weigh more than ten stone. There are, however, exceptions, which justify us in assuming eleven as the utmost limit of the sliding scale, but beyond that there is no impulse toward homicide. Seldom has such a phenomenon as a fat house-breaker been paraded at a criminal bar. It is your lean, wiry fellow, who works with the skeleton-keys, forces himself through closet windows which seemingly would scarce suffice for the entrance of the necessary cat, steals with noiseless step along the lobby and up the stairs, glides into the chamber sacred for more than half a century to the chaste repose of the gentle Tabitha, and with husky voice, and the exhibition of an enormous carving-knife, commands silence on pain of instant death, and delivery of her cash and jewels. It is your attenuated thief who insinuates himself under beds, behind counters, dives into tills, or makes prey of articles of commerce arrayed at shop-doors for the temptation of the credulous passenger. A corpulent burglar is as much out of place, and as little to be feared, as was Falstaff at

Gadsill—and what policeman ever yet gave chase to a depredator as bulky as a bullock? Corpulence, we maintain, is the outward sign not only of a good constitution, but of inward rectitude and virtue.

—Fitz Hugh Ludlow, in his overland trip to California, found between Utah and the Humboldt Mountains a large desert composed, as he says, of "sand of snowy alkali." He describes it as one of the most dismal and forbidding spots that was ever traversed by the foot of man; but in view of the extension through it of the Atlantic and Pacific railroad, he suggests an interesting possibility as to its future use. He says: "In its crudest state the alkaline earth of the desert is sufficiently pure to make violent effervescence with acids. No elaborate process is required to turn it into commercial soda and potash. Coal has already been found in Utah. Silix exists abundantly in all the desert uplifts. Why should not the greatest glass-works in the world be reared along the desert section of the Pacific road? and why should not the entire market of the Pacific coast be supplied with refined alkalis from the same tract?"

—In the new State of Nevada, one hundred miles west of Reese river, beneath a thin covering of refuse saline matter, for a depth of fourteen feet, pure rock salt is found as clear as ice and as white as snow. Beneath there is water, which seems to be filtered through salt to an unknown depth. The whole of the fourteen feet in thickness does not contain a single streak of deleterious matter or rubbish, and is ready for quarrying and sending to market.

—What a delightful correspondent was Dr. Thomas Chalmers! When in college he wrote very regularly to his mother, as all good boys should do. The good lady adjusted her glasses, and reading the superscription of her packages from the post-office, would carefully put away his letters, remarking, "I ken our Tommy's weel when he writes. Ever he comes home he'll read it for me."

—The following simple process will make lead pencil writing or drawing as indelible as if done with ink: "Lay the writing in a shallow dish and pour skimmed milk upon it. Any spots not wet at first may have the milk placed on them lightly with a feather. When the paper is all wet over with the milk, take it up and let the milk drain off, and whip off with the feather the drops which collect on the lower edge. Dry it carefully, and it will be found to be perfectly indelible. It cannot be removed even with Indiarubber." It is an old recipe, and a good one.

—Francis Galton, a well known English traveller, and member of the Alpine Club, has this summer made a singular experience. He discovered a spot on the Jungfrau range, where he might stand in safety and watch the avalanches sweeping past him, within thirty feet of his person. In one half-day he saw three descents. The avalanches slid two thousand feet, then leaped two great bounds of a thousand feet more to the channel close to which he was standing, and then burst out at the foot of the channel, "like a storm of shrapnel." F. Galton describes the general appearance of the avalanche when seen at a short distance, as that of an orderly mob filling the street, and hastening, not hurrying, to the same object." Something of the same impression is made upon one who looks attentively at the great sheet of water which rolls slowly down on the Canadian side of the falls at Niagara. The motion is majestically deliberate, and, though swift, not hurried. The noise of the avalanche in motion, F. Galton likens to "the sound of a rapid tide rushing up many channels." The avalanche is described as consisting of a mass of ice balls, usually from a foot to a yard in diameter, which produce "the fearful rattle of the ice-cascade."

—Mr. Ferguson states that the survey of Jerusalem under Lieut. Wilson and his party of sappers is going on most satisfactorily. The Pasha's authority affords them complete protection, and he gives them every facility they require, so that by next summer we may hope to have as perfect a survey of Jerusalem as we have of any English city, and to know as much as can be known of its mysterious water supply, and of the means by which its sanitary condition may be improved.

—It may be a consolation to "stuck up people," whose greatest boast is that they have never engaged in any useful employment, to be told of the following facts: Washington was a surveyor and a farmer. Franklin was a printer. Green was a blacksmith. Sumter was a shepherd. Roger Sherman was a shoemaker. Marion was a farmer, as were also Putnam, Allen and Stard. Hancock was a shipping merchant. Trumbull was an artist. Warren was a physician. Arnold (who though a traitor was a brave man and a good general) was a bookseller and druggist.

—Professor Hoffman has patented in England the process of manufacturing a new color, obtained from iodine, which affords several beautiful varieties of violet. The material, which is to be used for dyeing, is made by mixing rosoline with the iodides of ethyl, methyl or amyl.